

**ENSIGN GLOBAL COLLEGE
KPONG, EASTERN REGION, GHANA**

**FACULTY OF PUBLIC HEALTH
DEPARTMENT OF COMMUNITY HEALTH**

**THE PERCEPTION AND UTILIZATION OF TRADITIONAL
BIRTH ATTENDANTS' SERVICES BY EXPECTANT MOTHERS
AT THE NORTH TONGU DISTRICT IN THE VOLTA REGION, GHANA**

BY

**LUCY AMA DANKWAH
(207100169)**

JULY, 2022

ENSIGN GLOBAL COLLEGE
KPONG, EASTERN REGION, GHANA

THE PERCEPTION AND UTILIZATION OF TRADITIONAL
BIRTH ATTENDANTS' SERVICES BY EXPECTANT MOTHERS
AT THE NORTH TONGU DISTRICT IN THE VOLTA REGION, GHANA

BY

LUCY AMA DANKWAH
(207100169)

A THESIS SUBMITTED TO THE DEPARTMENT OF COMMUNITY HEALTH,
IN THE FACULTY OF PUBLIC HEALTH, ENSIGN GLOBAL COLLEGE
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR
THE MASTER OF PUBLIC HEALTH DEGREE

JULY, 2022

DECLARATION

I hereby declare that this submission is my own work towards the Master of Public Health degree and that to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the College except where due acknowledgement has been made in the text.

Lucy Ama Dankwah
(207100169)	Signature	Date
(Student)		

Certified by:

Dr. Edward Sutherland
(Supervisor's name)	Signature	Date

Certified by:

Dr. Stephen Manortey
(Head of Academic Program)	Signature	Date

DEDICATION

This research is dedicated to the glory of the Almighty God for providing me with the strength through the exhaustive times to be able to complete this study. It is also dedicated to my family and friends for their support.

ACKNOWLEDGEMENT

“The race is not to the swift nor the battle to the strong, neither yet bread to the wise, nor yet riches to men of understanding nor yet favour to men of skill; but time and chance happeneth to them all” (Eccl. 9:11)

I am grateful to the Almighty God for giving me wisdom and the grace to enable me complete this research work. I also extend sincere gratitude to my supervisor, Dr. Edward Sutherland for his patience, guidance and tolerance in seeing me through to this point. To my loving and supportive husband Alexander C. Dankwah, my brother Dr Seiwu Bello for his support and my children Samuel, Joseph, Hephzibah and Ama Boadu Boaduwa who ran various errands.

I also extend my sincerest gratitude to my data collection team especially Pepertual, Pearl, Gifty, Saviour, Russel, Caleb and Opoku. I also express my profound gratitude to Madam Love Grace Ofori (HNS) for her encouragement and support to pursue the course, to my medical director Dr. Omare Yeboah, Dr. Michael Dade and Dr. Charles Arhinful.

I further extend my sincerest gratitude to all the North Tongu District Health Directorate, the health workers within the district for their support during the data collection and also to my respondents the time and effort spent to aid my course.

DEFINITIONS OF TERMS

TBA - A Traditional birth attendant (TBA), according to WHO is “a person who assists a mother during childbirth and who initially acquired her skills by delivering babies herself or through apprenticeship to other traditional birth attendants”.

Maternal Mortality - It is defined as deaths occurring in women, while pregnant or within 42 days of termination of pregnancy irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

Maternal Morbidity – it describes any short- or long-term health problems that result from being pregnant and giving birth.

Supervised Delivery – it is defined as a birth that occurred in any accredited public or private health facility under the supervision of a nurse, midwife or doctor.

ABBREVIATION/ACRONYMS

ACOG	–	American College of Obstetricians and Gynaecology
ANC	–	Antenatal Care
CHNs	–	Community Health Nurses
CHPS	–	Community-based Health Planning and Services
GDHS	–	Ghana Demographic and Health Survey
GHS	–	Ghana Health Service
GSS	–	Ghana Statistical Service
LGA	--	Local Government Area
LMIC	–	Low-and-Middle Income Countries
NHIS	–	National Health Insurance Scheme
OPD	–	Out Patient Department
SDG	–	Sustainable Developmental Goals
TBA	–	Traditional Birth Attendant
UN	–	United Nations
UNPF	–	United Nations Population Fund
WHO	–	World Health Organization

ABSTRACT

Background

Globally, the utilization of supervised delivery services is one of the key proven interventions that had reduced maternal deaths because of its potential to ensure safe birth, reduce both actual and potential complications and increase the survival of mothers and newborns. Despite the reduction in maternal mortality cases in sub-Saharan Africa, there are still a lot of deliveries done at home leading to both maternal morbidities and mortalities. In Ghana, the situation is worse in rural settings. This study therefore sought to examine the perception and utilization of traditional birth attendants (TBA) by expectant mothers at the North Tongu District in the Volta Region.

Methods

The study adopted a cross-sectional study design. Four hundred and forty-two participants were selected using a multistage sampling approach. Data were collected using a structured interviewer-administered questionnaire. STATA 17 statistical software was used for data analysis. Descriptive statistic such as frequencies and percentages were used for categorical variables. Continuous variables were analyzed using mean and standard deviations. The Fisher's exact test or Pearson Chi-square test were adopted for the bivariate analysis using an alpha level of 0.05. The relationship between the significant covariates and outcome variables were modelled using a 95% confidence interval.

Results

About 57% of the 442 participants had used TBA services. Having more than one gravida (aOR=0.38;95% CI=0.23-0.62) decreased the woman's odds for TBA uptake. Also, having parity of 2 elevated a woman's odds for TBA uptake (aOR=4.15; 95% CI=1.92-8.96),

compared to having a parity of one. Participants held the perceptions that TBA services achieved desired results for clients (aOR=1.40; 95% CI=1.10-5.80), TBAs were licensed and permitted to offer their services (aOR=4.24;95% CI=2.04-8.11) and clients of TBA services were satisfied with their services (aOR=2.33; 95% CI=1.04-8.93).

Conclusion

The women's uptake of TBA services were mostly influenced by their perceptions. There is therefore the need for the District Health Directorate and community support groups to mount campaigns to educate women on the benefits of supervised delivery services as opposed to TBA services.

TABLE OF CONTENT

DECLARATION	ii
DEDICATION.....	iii
ACKNOWLEDGEMENT	iv
DEFINITIONS OF TERMS	v
ABBREVIATION/ACRONYMS.....	vi
ABSTRACT	vii
TABLE OF CONTENT.....	ix
LIST OF TABLES.....	xiii
LIST OF FIGURES	xiv
LIST OF MAPS	xv
LIST OF APPENDICES.....	xvi
CHAPTER ONE.....	1
INTRODUCTION	1
1.1 Background Information.....	1
1.2 Problem Statement.....	3
1.3 Rationale of the Study	5
1.4 Conceptual Framework.....	5
1.5 Research Questions.....	7
1.6 General Objectives.....	7
1.7 Specific Objectives	8
1.8 Profile of Study Area	8
1.9 Scope of the Study	9
1.10 Organization of Report	10
CHAPTER TWO.....	11

LITERATURE REVIEW	11
2.1 Introduction.....	11
2.2 Empirical Review	11
2.2.1 Supervised Delivery	11
2.2.2 TBA Services	12
2.2.3 Complications Associated with TBA Services	13
2.2.4 Findings from Similar Studies	17
CHAPTER THREE	21
METHODOLOGY	21
3.1 Study Design.....	21
3.2 Data Collection Instrument.....	21
3.3 Data Collection Procedure	22
3.4 Study Population.....	22
3.5. Study Variables.....	23
3.6 Sample Size Estimation	24
3.6.1 Sample size calculation.....	25
3.7 Sampling Technique	26
3.8 Study Site.....	27
3.9 Inclusion Criteria	28
3.10 Exclusion Criteria	28
3.11 Pre-Testing.....	28
3.12 Data Handling	29
3.13 Data Analysis and Presentation of Results	29
3.14 Ethical Consideration.....	30
3.15 Validity and Reliability.....	30

3.16 Limitations of The Study	31
3.17 Assumptions	31
CHAPTER FOUR	32
RESULTS	32
4.1 Socio-Demographic Information	32
4.2: The knowledge level of expectant mothers on TBA services in the North Tongu District.....	33
4.3: The perception of expectant mothers towards TBAs services in the North Tongu District.....	36
4.4: The utilization level of TBA services and factors influencing its patronage among women in the North Tongu District	38
CHAPTER FIVE	46
DISCUSSION	46
5.1 Introduction.....	46
5.2 The knowledge level of expectant mothers on TBA services in the North Tongu District.....	46
5.3: The perception of expectant mothers towards TBAs services in the North Tongu District.....	47
5.4 The utilization level of TBA services and factors influencing its patronage among women in the North Tongu District	48
CHAPTER SIX.....	52
CONCLUSIONS AND RECOMMENDATIONS	52
6.1 Summary.....	52
6.2 Conclusions.....	52
6.3 Recommendations.....	53

6.3.1: Practices	53
6.3.2 Policy	53
6.3.3 Research	53
REFERENCES	54
APPENDICES	62
APPENDIX I: ETHICAL CLEARANCE FROM ENSIGN GLOBAL COLLEGE.....	62
APPENDIX II: INFORMED CONSENT	63
APPENDIX III: INTERVIEW QUESTIONNAIRE	66
APPENDIX IV: PLAGIARISM CHECK REPORT	72

LIST OF TABLES

Table 1.1: Annual Total Deliveries, North Tongu District, 2016 – 2020.....	4
Table 4.1: Socio-demographic characteristics	32
Table 4.2: Percentage of correct responses according to the question subjects	35
Table 4.3: The perception of study participants regarding TBAs services.....	37
Table 4.4 Uptake of TBA services	38
Table 4.5 Bivariate analysis of association between socio-demographics and TBA services uptake	39
Table 4.6 Bivariate analysis showing an association between participant perception and TBA Services Uptake.....	41
Table 4.7 Multivariate analysis showing an association between participant characteristics and TBA Services Uptake	43

LIST OF FIGURES

Figure 1.1 Conceptual Framework	7
Figure 4.1 Sources of Information on TBA services	34
Figure 4.2 Overall Percentage Knowledge Level	35

LIST OF MAPS

NORTH TONGU DISTRICT MAP 9

LIST OF APPENDICES

APPENDIX I: ETHICAL CLEARANCE FROM ENSIGN GLOBAL COLLEGE.....	62
APPENDIX II: INFORMED CONSENT	63
APPENDIX III: INTERVIEW QUESTIONNAIRE	66
APPENDIX IV: PLAGIARISM CHECK REPORT	72

CHAPTER ONE

INTRODUCTION

1.1 Background Information

Maternal mortality is defined as a woman's death as a result of complications during pregnancy or childbirth. The global maternal mortality ratio (MMR) declined by 38% between 2000 and 2017, from 342 to 211 deaths per 100,000 live births, according to UN inter-agency figures. This amounts to an average yearly drop rate of 2.9 percent. While noteworthy, this is less than half of the 6.4% annual rate necessary to fulfill the SDG of 70 maternal deaths per 100,000 live births (WHO, 2019).

Since the year 2000, there has been substantial development. South Asia obtained the biggest overall percentage drop in MMR between 2000 and 2017, with a reduction of 59 percent, while Sub-Saharan Africa achieved a significant reduction of 39 percent over this period (WHO, 2019).

Due to its ability to assure safe birth, minimize both actual and prospective problems, and enhance the survival of women and infants, the use of supervised delivery services is one of the primary proven strategies that might reduce maternal fatalities (Gedefaw et al., 2014). Despite the decrease in maternal mortality cases in Sub-Saharan Africa, many births are still performed at home, resulting in both maternal morbidity and mortality (WHO, 2019; Gedefaw et al., 2014). In Ethiopia, for example, research found that while 71% of women got antenatal care (ANC) from a health professional, only 16% of births were helped by health professionals (Pfeiffer & Rosemarie, 2013).

Many maternal health interventions implemented in Ghana in recent years, such as free delivery services, the establishment of Community-based Health Planning and Services

(CHPS), the National Health Insurance Scheme (NHIS), and health education on the benefits of using maternity services, were expected to increase access to skilled delivery services for all pregnant women; however, this is not the case in many settings in-country (Kotoh, Aryeetey & Van Der Geest, 2018). While demand for Antenatal Care (ANC) has remained robust, demand for competent delivery services has remained relatively modest. According to Ghana's most recent Demographic and Health Survey (GDHS), nationwide ANC coverage of at least four visits was 97%, while monitored delivery was 74% and unsupervised or home births were 26%. (GHS and GSS, 2014). The situation is significantly worse in rural Ghana, where supervised delivery is 59% compared to 90% in urban areas (GHS and GSS, 2014). Many variables impact women's birthplace selections, including demographic, socioeconomic, cultural, and health-care system considerations according to Warren, Njue, Ndwiga, and Abuya (2017).

Traditional Birth Attendants (TBAs) are responsible for 60-80% of all births in developing-country rural settings worldwide (Ebuehi and Akintujoye, 2012). TBA-monitored home births have long been tied to norms of culture and their various beliefs according to their religion, as well as the cost and availability of services. In Sub-Saharan African studies, for example, a dearth of medical professionals for maternal health care pushed women to seek maternity treatments from TBAs (Ugboaja et al., 2018).

A TBA is described by WHO (2019) as a person (usually a woman) who has learned to deliver infants on her own or in collaboration with other TBAs and who aids women during delivery. TBAs are usually initiated through internships with family and non-family TBAs, but they can also be initiated through dreams and revelations. Their profession is related with the use of spiritual and physical practices that include the use of artifacts, medicines, and physical examination (Aziato and Omenyo, 2018). According to related research, the

role of TBAs is evolving over time as governments, health authorities, and international organizations strive to regulate, control, and, in some circumstances, ban their operations (Pyone et al., 2014). TBAs, for example, are now playing advocacy, sensitization, and referral roles in some jurisdictions rather than managing direct delivery situations (Chi and Urdal, 2018). In Ghana, recent efforts have been made to confine TBA operations in some regions to sensitization and awareness-raising. Furthermore, the introduction of free maternal health services for pregnant women, as well as the National Health Insurance (NHIS) in Ghana, are projected to alleviate the financial burden on pregnant women in order to enhance access to professional birth-care services. Current studies in Sub-Saharan Africa and Ghana, still, confirm that the practice of TBAs is still practiced largely among the population, and government policies limiting their services may be ineffective because rural women prefer the services of TBAs due to a variety of factors that work against access to professional maternal care (Moyer et al., 2014; Adatara et al., 2018).

TBAs are known to provide economical (Bohren et al., 2015) and accessible services in rural locations, as well as make deliveries in an atmosphere familiar to the mother (Sarker et al., 2016). Furthermore, the desire for TBA services has been related to their respect for consumers' religious views (Atuoye et al., 2015). Women continue to utilize TBA services in Ghana, particularly in rural and disadvantaged communities (Moyer et al., 2014), such as the North Tongu District in Ghana's Volta Region, which was chosen as the subject location for this research. As a result, a greater knowledge of this public health issue of district and national importance is required.

1.2 Problem Statement

Despite tremendous success in lowering maternal and neonatal mortality in Ghana over the previous decade, trained attendant-assisted delivery has not grown as much as projected

(Moyer et al., 2014). Several maternal health interventions executed in Ghana in recent years, such as free delivery services, the institution of Community-based Health Planning and Services (CHPS), the National Health Insurance Scheme (NHIS), and health education on the importance of utilizing maternity services, were expected to increase access to supervised delivery services for all pregnant women in the country, but recent studies in Sub-Saharan Africa, including Ghana, show that the practice is not as widespread as previously thought (Moyer et al., 2014). This trend is shown in records received from the District Health Directorate of the North Tongu District in Ghana's Volta region. Table 1.1 shows the different statistics for both supervised and unsupervised delivery in the North Tongu District from 2016 to 2020. TBAs continue to make up a large portion of deliveries in this region.

Table 1.1: Annual Total Deliveries, North Tongu District, 2016 – 2020

Year	Total Delivery			Supervised delivery rate	Percentage of deliveries conducted by TBAs
	Supervised delivery	TBAs delivery	Total		
2016	2,349	472	2,821	83.3	16.7
2017	2,386	409	2,795	85.4	14.6
2018	2,732	273	3,005	90.9	9.1
2019	2,668	124	2,792	95.5	4.4
2020	2,894	108	3,002	96.4	3.6
TOTAL	13,029	1,386	14,415	90.4	9.6

Source: North Tongu District Health Directorate, 2021

The information in Table 1.1 implies that TBAs continue to play an important role in deliveries at home within the district. According to data from the Ghana Health Service in

2020, there were five (5) maternal deaths within the North Tongu District which is very alarming. Most of the deaths were attributed to the affected mothers reporting late to health facilities after failed delivery attempts at home with the assistance of TBAs. According to the SDG goal three (3), the target is to reduce the global maternal mortality ratio to less than 70 per 100,000 live births. The aim is to help reduce maternal deaths to the minimum and to totally eliminate it eventually in the nearest future. To date, there is a paucity of literature concerning the reasons for the use of TBA services in the North Tongu District of Ghana. This study, therefore, assessed the factors that influence the perception and utilization of TBA services by expectant mothers within the North Tongu District.

1.3 Rationale of the Study

The study's findings will be utilized as confirmatory evidence to either validate earlier studies or to detect differences and offer corrective steps to misguided attitudes and variables supporting the use of TBA services in the North Tongu District. The project would also act as fundamental research for the North Tongu District, providing statistics. This will serve to inform the North Tongu Health Management Team, policymakers, funding agencies, and other stakeholders on the management strategies that may be used to discourage the use of unskilled labor during labor. As a result of increased monitored delivery rates, this study will likely lead to improved mother health and a decrease in maternal mortality ratio. The findings from this study would aid in future studies on improving supervised delivery rates.

1.4 Conceptual Framework

The conceptual framework was based on the factors that influence the utilization of TBA services. The factors include the knowledge on TBA services by expectant mothers, perception of expectant mothers on TBA services and the socio-demographic

characteristics of the expectant women (age, marital status, religion and ethnicity). In terms of the knowledge factor, TBAs have always been the primary human option for women during delivery as they are more known to these women especially those in the rural areas. The women who patronize their services tend to have heard or know about them from sources such as parents, spouses and other community or family members. This in turn serve as a source of motivation or reminder for them to visit these TBAs for their care. The perception of women also plays a role in the utilization of TBA services. In most rural communities, these TBAs are seen as a source of “spiritual gurus” who would help deliver babies without complications and away from any evil eyes. Hence these women would rather visit them instead of the health facility for delivery. When these women have a positive perception or experiences from these TBAs, it would in turn inform their decision to visit them and same if they have a negative perception of their services. An individual’s background or socio-demographic characteristics especially in terms of ethnicity and marital status plays a key role in informing their decision to utilize TBA services or not. Women in rural areas who come from families who have a history of TBA deliveries would in turn patronize their services it would be seen as the appropriate means to use. Also, spouses who do not have a better understanding on the need for a skilled delivery would in turn ensure that their wives visit TBAs for their care. In some communities, there is a TBA in every family, meaning it is their job to deliver the children of that family as and when the need arises.

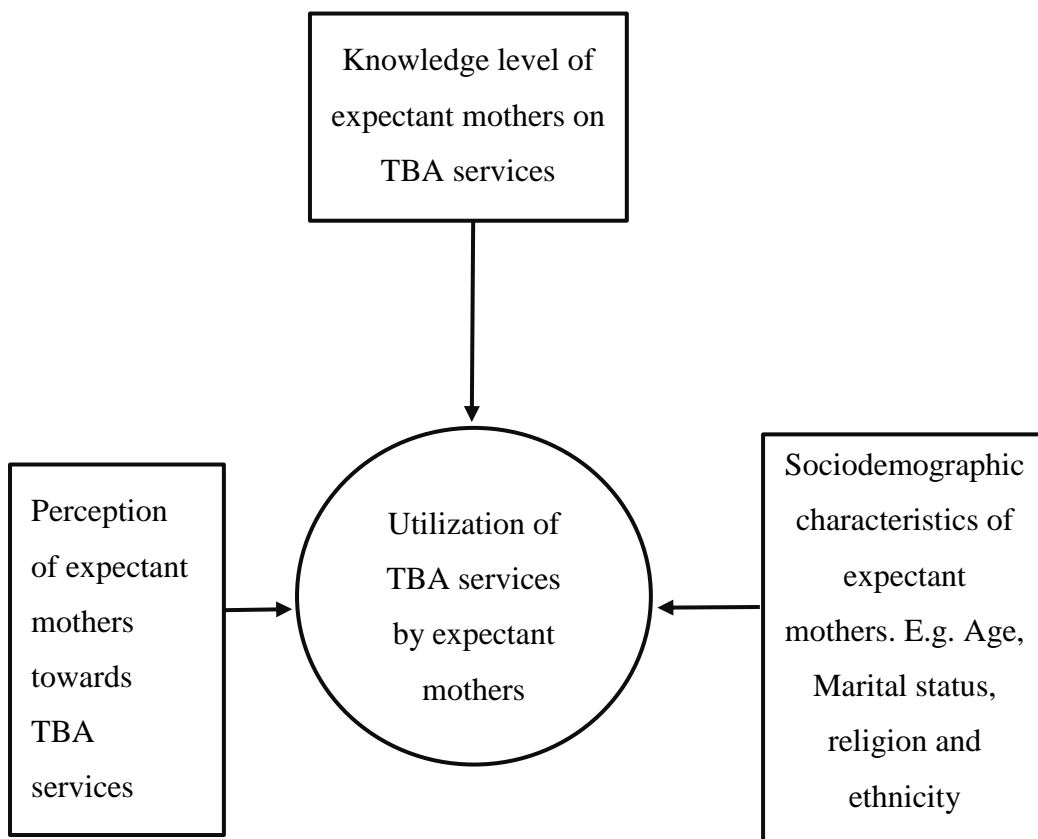


Figure 1.1: Conceptual Framework

1.5 Research Questions

The research project aims at answering the questions below:

1. What is the level of knowledge of expectant mothers on TBA services in the North Tongu District?
2. What is the perception of expectant mothers on TBAs services in the North Tongu District?
3. What is the utilization level of TBA services and which factors influence its patronage among women in the North Tongu District?

1.6 General Objectives

The general objective of the research is to assess the perception and utilization of TBA services among expectant mothers at the North Tongu District.

1.7 Specific Objectives

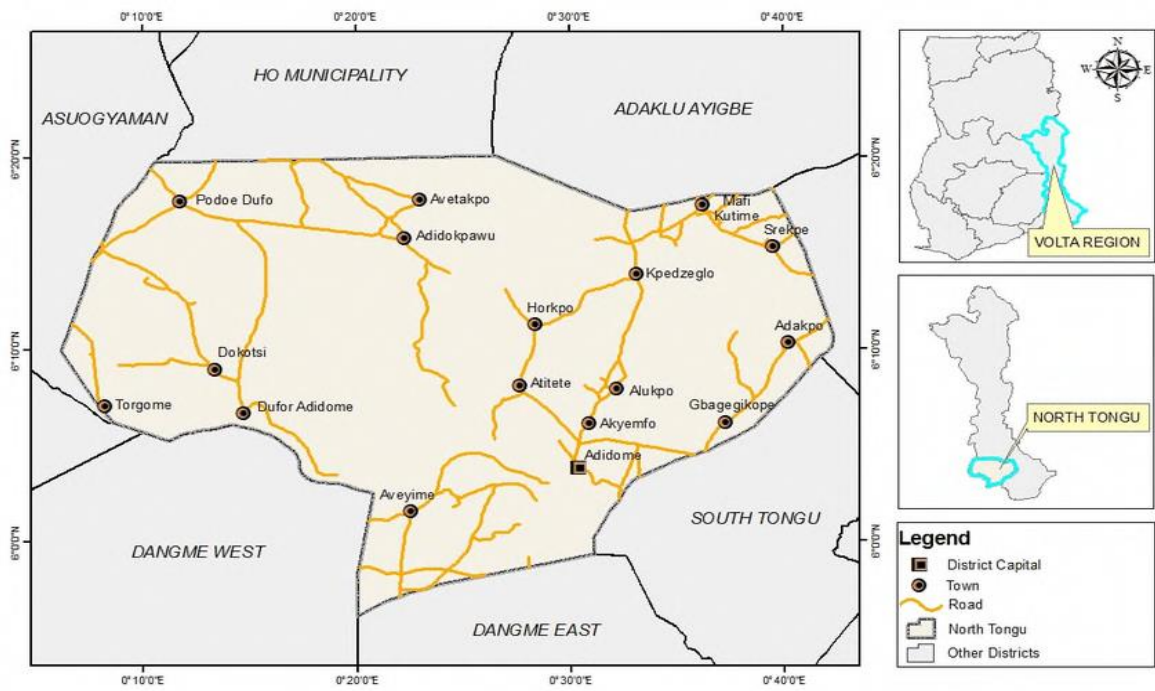
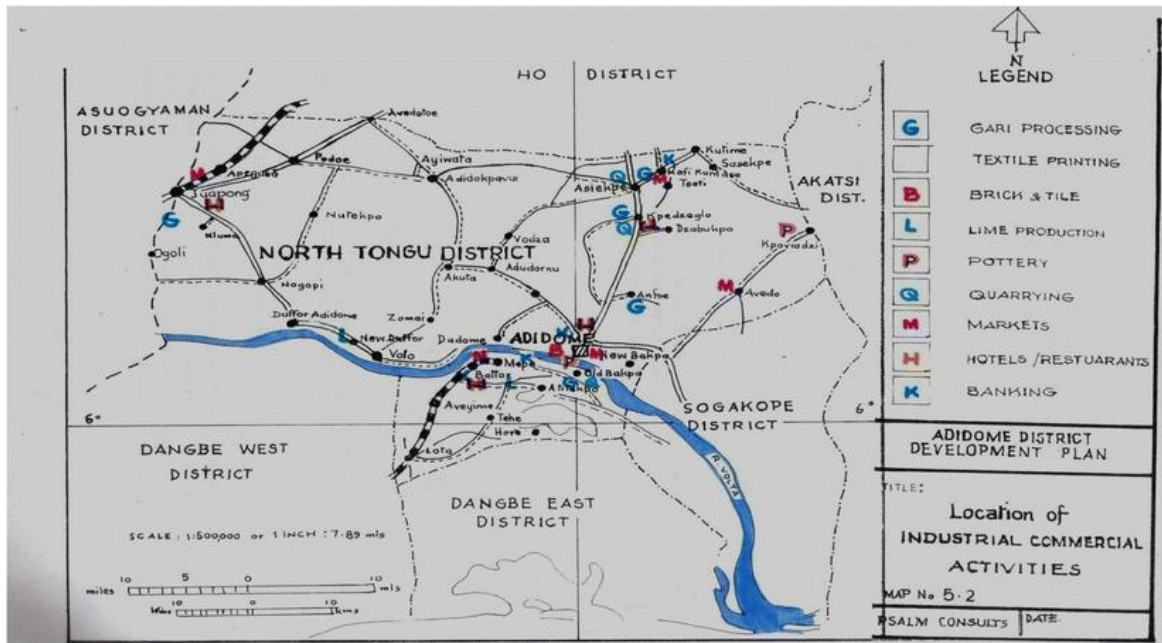
To achieve this general objective, the following specific objectives are sought:

1. To assess the knowledge level of expectant mothers on TBA services.
2. To evaluate the perception of expectant mothers towards TBAs services.
3. To determine the utilization level of TBA services and the factors influencing its patronage among women.

1.8 Profile of Study Area

The research was carried out in Ghana's Volta Region's North Tongu District. North Tongu District, with its capital at Battor, is one of the newly formed District Assemblies in 2012. The North Tongu District Assembly was inaugurated and began operations in July 2012, after being carved out of the previous North Tongu District, which is now Central Tongu by Legislative Instrument (L.I 2081). The district has a population of 89,777 people, with 42,492 men (representing 47.3 percent) and 47,285 females (representing 52.7 percent). The district accounts for 4.2 percent of the Volta Region's total population and 0.4 percent of Ghana's overall population. The district has 53,954 people, 60.0% of whom live in rural regions, compared to regional and national statistics of 66.3% and 49.1%, respectively (NTD, 2020).

NORTH TONGU DISTRICT MAP



1.9 Scope of the Study

The research was limited to exploring the perception and utilization of Traditional Birth Attendants (TBAs) services by expectant mothers at the North Tongu District in the Volta

Region of Ghana. The research sample did not include pregnant women who are outside the North Tongu District so as to prevent inconsistencies in data or results since the geographical location also plays a role in one's decision. The expectant mothers would provide information on the reasons for choosing a particular method of healthcare delivery in terms of TBAs and supervised delivery. Again, the study would not involve women who are on any form of birth control method or are above the reproductive age.

1.10 Organization of Report

The research was made up of six (6) chapters. Chapter one focused on the background of the study, the statement of the problem, purpose of the study, objectives, research questions, significance of the study. Chapter two reviewed relevant related literature on the theoretical framework, empirical review, conceptual framework and review of related literature based on the objectives and research questions of the study and included a summary. The chapter three focused on the methodology used for the study. Chapter four presented the results based on key study variables. The fifth chapter covered discussions of the results and chapter six covered conclusions and recommendations from the findings of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter sought to review available and relevant literature that informs the study. The chapter reviewed the knowledge level of women on supervised delivery and the knowledge of women on TBAs services in the North Tongu District. The literature review was based on a review of similar studies that have been done in various countries around the world and on the sub-themes drawn from the research questions. It begun with the empirical review, the knowledge level of women on supervised delivery, the knowledge of women on TBAs services and ends the factors influencing the patronage of TBAs services among women within the North Tongu District.

2.2 Empirical Review

2.2.1 Supervised Delivery

A skilled delivery is one that is performed by a certified professional, such as a midwife, doctor, or nurse, who is capable of managing normal pregnancies, childbirth, and the immediate postnatal period, as well as identifying, managing, and if necessary, referring women and newborns with complications (Iyanda & Osayomi, 2019). A qualified health professional (doctor, nurse, or midwife) present during delivery is critical in preventing mother and infant fatalities. In 2010, around 287 000 women died while pregnant or giving birth, and 3.1 million babies perished within their first year of life (WHO, 2022).

In 2017, the World Health Organization (WHO) projected that over 295 000 women died during and after pregnancy and delivery. In 2017, Sub-Saharan Africa and Southern Asia accounted for over 86% (254,000) of the estimated global maternal fatalities. Sub-Saharan

Africa alone was responsible for about two-thirds (196,000) of maternal fatalities, while Southern Asia was responsible for nearly one-fifth (58,000). (WHO, 2019). The majority of maternal fatalities are preventable, owing to well-established health-care approaches for avoiding or treating problems. During and after delivery, all women deserve high-quality care. Maternal and baby health are inextricably linked. All births should be attended by qualified medical personnel, because timely care and treatment can mean the difference between life and death for both the mother and the baby (WHO, 2019).

SDG 3 aspires to reduce maternal mortality worldwide to less than 70 deaths per 100,000 live births. Despite an increase in ANC participation, professional delivery in Ghana remains low. According to Ghana's most recent Demographic and Health Survey (GDHS), ANC coverage of at least four visits was 97% nationally, with supervised delivery at 74%. Rural Ghana has a far worse condition, with monitored delivery rates of 59% compared to 90% in cities (Ganle, Kombet & Baatiema, 2019).

2.2.2 TBA Services

A traditional birth attendant (TBA), also known as a traditional midwife, community midwife, or lay midwife, is a professional who provides pregnancy and delivery care. Traditional birth attendants offer the majority of primary maternity care in many developing countries, although in wealthier countries, they may serve specific groups (WHO, 2010).

Traditional midwives provide minimal health care, support, and counseling throughout and after pregnancy and delivery, relying mostly on informal experience and knowledge garnered from their communities' traditions and customs. They mostly serve in rural, distant, and underserved medical settings. TBAs may not obtain formal education or training in health care delivery, and no explicit professional requirements, such as

certification or license, exist (Owoseni and Owumi, 2013). Although a traditional birth attendant may have had proper training, they may have refused to register. They frequently learn their trade through apprenticeship or self-education; in many locations, experience as a mother is one of the requirements for client approval as a TBA. Traditional midwives frequently work with herbalists and other traditional healers. They might be part of the established health-care system or not. They may accompany women to health facilities for delivery and act as a link between the community and the official health system (WHO, 2019).

While home birth rates have dropped in low- and middle-income countries (LMICs), more than 25% of births still occur outside of a health facility globally, with large differences in these rates, with more than half of women giving birth outside of the health system in some countries. TBAs attend the vast majority of these deliveries, despite the fact that some are seen by family members or health practitioners associated with recognized health care organizations. TBAs are widely utilized in low-income countries (LMICs) across the world. Despite the fact that they attend the majority of births in rural areas, they also attend births in cities, particularly among the poor (Lane and Garrod, 2016).

TBA attendance has decreased from 40.6 percent in 2010 to 22.0 percent in 2017 in LMIC locations belonging to the Global Network for Women and Children's Health Research, a multi-site research network that monitors population-based delivery patterns (Vieira et al., 2018).

2.2.3 Complications Associated with TBA Services

TBAs may have the abilities to aid with births, but several difficulties, such as an increased risk of maternal and neonatal morbidity and mortality, are still present (Wilson *et al.*, 2011). When compared to births supervised by midwives and other health professionals,

TBA deliveries have been proven to be associated with four times greater morbidity and mortality (Awotunde *et al.*, 2017). These complications include:

2.2.3.1 Perineal laceration.

A perineal laceration (vaginal tear) is a tear in the tissue around the vaginal and rectum that can happen during delivery. The deadliest of the four types of tears is a fourth-degree tear or laceration. An episiotomy is a surgical procedure that gradually expands the vaginal opening (ACOG, 2016). During the birth process, a woman's vagina and surrounding tissues are prone to tear. If a tear is severe enough it can lead to post-partum hemorrhage, vesico-vaginal fistula and recto-vaginal fistula. Because the majority of TBA births are done at home, it is often impossible to avoid these lacerations. Most TBAs strive to utilize their own knowledge to prevent these mishaps, but because they have little or no experience in such situations, they tend to neglect it in certain circumstances and "do the best they can," leaving the lady to her fate (Malvasi *et al.*, 2021).

2.2.3.2 Post-partum Hemorrhage.

Heavy bleeding after delivery is known as postpartum hemorrhage. When about 500ml or more of blood in spontaneous vaginal delivery and 1000ml or more in caesarean session is lost, a person's blood pressure will drop dramatically. If left untreated, it can cause shock and death. Worldwide, such bleeding is a leading cause of maternal death (WHO, 2010).

TBAs, unlike skilled birth attendants, are not qualified to avert these circumstances since they lack the necessary expertise. In some circumstances, blood transfusion is required, which is only accessible at health institutions. It is absolutely impossible to make such an intervention with home delivery; thus, women are left to their own fate since the TBAs are not skilled enough to intervene.

2.2.3.3 Ruptured Uterus

Uterine rupture occurs when the uterus tears spontaneously and the fetus is palpable abdominally. Since the TBAs are not preview to the predisposing factors of uterine rupture: big baby, prolonged labour, the mothers tend to bleed profusely and suffocate the baby (WHO, 2010). This problem is mostly due to the TBAs' lack of technical expertise. To try to handle these circumstances, they largely rely on their primal impulses, which in most cases end up causing more injury or harm to the mother and infant. The mother and baby require the utmost care during delivery since the mother, as well as the baby, are extremely vulnerable at this time.

2.2.3.4 Genital Tract Laceration

Genital Tract Lacerations are more prevalent during delivery in the cases of cervical oedema, a big foetus, or instrumental extraction or delivery (forceps or vacuum extractor). Every maternity unit should have a sterile set of vaginal retractors and lengthy tools on hand for the examination and treatment of deep cervical and vaginal tear (ACOG, 2016). The TBAs though may have knowledge on delivery, they tend to have little knowledge about these complications, therefore they sometimes overlook it when it happens. Even when they notice these tears, they do not have the requisite skills for repairing the tear, hence the mothers are left to their own fate to deal with the situation.

2.2.3.5 Birth Asphyxia.

This condition develops when there is lack of oxygen supply for the fetus in the utero, during labor, delivery or shortly after birth. Prolonged labor, midforceps, or breech delivery in full-term newborns; abruption placentae, difficult breech delivery, and preterm infants; and unsupervised precipitate delivery in immature infants are the most common causes of birth hypoxia and trauma (ACOG, 2016). It is prevented or readily handled in

cases when the delivery is performed by a trained birth attendant, but there is a larger chance of this complication if the delivery is performed by a TBA.

2.2.3.6 Neonatal Sepsis

Neonatal sepsis is a blood infection that affects infants under the age of ninety (90) days. The most prevalent cause of sepsis is bacterial infections, which are more common with home deliveries (ACOG, 2016). The TBAs do their deliveries in their homes, they do not have knowledge on aseptic techniques, Infection Prevention and Control etc. Additionally, some TBAs do not have the appropriate PPEs in conducting delivery, putting both the mother and the infant at risk.

2.2.3.7 Cord Sepsis

The umbilical cord provides direct access to the bloodstream, therefore even a minor infection can swiftly escalate. When an infection spreads via the circulation, it can cause life-threatening damage to the body's organs and tissues, which is known as sepsis. When bacteria are introduced into the uterus by hands, surgical, or delivery devices, cord sepsis can ensue. Bacteria are more easily disseminated when bacteria may enter through a breach in the skin or damaged tissue, which can happen after childbirth (ACOG, 2016).

2.2.3.8 Neonatal Jaundice

Jaundice is a yellow coloring of the skin and eyes in neonates. When a baby's bilirubin level, a yellow pigment produced during the normal breakdown of red blood cells, is too high, he or she develops newborn jaundice. The most prevalent cause of jaundice is hyperbilirubinemia (excess bilirubin). Bilirubin, the yellow pigment that causes jaundice, is a naturally occurring component of the pigment produced during the breakdown of "used" red blood cells (ACOG, 2016). This situation is mostly avoided through education

by a health worker or the skilled birth attendant. In the case of TBAs, due to the little or no knowledge they have on the situation, they cannot provide any support to the mothers in these situations. This can result in further complications and in the long run led to the death of the baby.

2.2.3.9 Death

Maternal and infant mortality is when a mother or baby dies during labour. Many factors can lead to that but most can be prevented if the delivery is done by a skilled attendant rather than a TBA. During delivery, it is important that the vital signs of the mother and the baby are monitored while the environment is kept sterile to prevent infections but TBAs do not have the required expertise or the necessary tools to carry out the processes involved in safe delivery. Most maternal or infant deaths during delivery mostly occur in the hands of TBAs or at the hospital after the TBAs have had the “first taste of the action” then realizing that they cannot control the situation, they then bring the patient to the health facility where little can be done.

2.2.4 Findings from Similar Studies

2.2.4.1 The knowledge level of women on TBA services

The TBA, also known as indigenous midwife, empirical midwife, traditional midwife may be found in practically every village and many urban settings throughout Africa, Asia, and Latin America. TBAs are thought to attend to between 60 and 80 percent of all deliveries in the developing countries (Allou, 2018).

TBAs were known to 92.4 percent of respondents in an Allou poll conducted in 2018. For individuals who were aware of TBAs, their mothers (31.2%) were the major sources of information. Other family members (33.8%), friends (17.7%), neighbors (13.9%), and

health care workers (3.5%) were also cited. Ladies commonly visit their businesses for delivery because to their handy location in the area. Their services are also less costly than those supplied by hospitals.

Historically, TBAs were the most prevalent human option for women during delivery. Their function varies according to culture and period, but they still attend the bulk of births in rural parts of poor nations. They undoubtedly play a key role in cultural competency, comfort, empathy, and psychological support during delivery, all of which are beneficial to both the mother and the newborn child. TBAs have the potential to enhance maternal and newborn health at the community level, according to the WHO (2019). TBAs are educated to care for pregnant women and deliver infants, but they are rarely trained to deal with problems. TBAs and village midwives have been employed successfully in a number of projects in developing countries to reduce maternal mortality and improve pregnancy outcomes. In 2012, 40 million newborns in developing nations remained neglected owing to a shortage of qualified health workers (WHO, 2013).

2.2.4.2 Attitude of women towards TBA services

According to respondents in a study conducted in Edo State, south Nigeria, TBAs may play a key role in family planning, screening for high-risk pregnant women, fertility/infertility treatment, and maternity and child care services. TBA services are preferred by rural dwellers over city residents. Home delivery, TBA availability, accessibility, low-cost services, and rural communities' trust in the efficacy of their services all played a role in their selection (Oshonwoh et al., 2014).

Women are unable to receive expert delivery services due to a variety of cultural attitudes. Women are said to discreetly carry out their bodies' secrets for a long period throughout pregnancy. They also believe they are being disruptive and that their partners are not

supporting them. Women's fears of disease and death during labor were prevalent. Although traditionally revered, most women do not perceive home delivery to be a safe alternative. (Nina *et al.*, 2008)

Furthermore, giving birth in a health facility is associated with infidelity. Their idea was that transferring a pregnancy to another man without his agreement was the root cause of health-care facility births (Bazzano, Kirkwood, Tawiah Agyemang, Owusu Agyei, and Adongo, 2008).

According to Anyait, Mukanga, Oundo, and Nuwaha (2012), in order to avoid being circumcised, women prefer to have their babies delivered by a skilled health attendant in order to conceal their status from the community, as this could result in shame and lower their social standing, as women who give birth in a health facility are uncircumcised.

2.2.4.3 Utilization of TBA services

TBAs are expected to attend between 60 and 80 percent of all deliveries in underdeveloped nations, with a considerable majority of them taking place outside of contemporary health care facilities. TBAs, like in other underdeveloped nations, deliver the bulk of women in Nigeria. According to the study, despite the fact that 93 percent of rural women in eastern Nigeria enrolled for prenatal care, 49 percent gave birth at home with the aid of TBAs (Eshiet, Jackson and Akwaowoh, 2016).

Similarly, a study conducted in Nigeria found that 65 percent of the moms had been delivered by a TBA, and seventy-four (74) percent had sought their assistance for a retained placenta with hemorrhage. Eighty-four (84) percent of households interviewed in Niger State's Chanchaga LGA in north central Nigeria used the services of a TBA or community health worker (Ebuehi & Akintujoye, 2012).

According to the GDHS, the Northern sector had one of the lowest skilled personnel deliveries in 2017. Due to the low number of monitored births, achieving the UN Millennium Development Goals on maternal health by 2015 appears to be a pipe dream in Ghana and Africa in general (Yakong, 2010). Healthcare systems that fail to promote fair provision and access to health care, particularly for women, exacerbate health inequities and obstruct national and international growth. Most pregnant mothers in rural regions prefer to travel to the TBA for a variety of reasons, including proximity, financial constraints, and other superstitions that prohibit them from accessing professional experts (Darko-Gyeke, Aikins, M., Aryeetey, R., Mccough & Adongo, 2013). This indicates that despite the knowledge about skilled delivery, there is also significant knowledge about TBAs and their influence on the society. Despite efforts to reduce their contact with pregnant women as studies (Sumankuuro, Mahama, Crockett, Wang and Young, 2019; Sarker, Rahman, Rahman, Hossain, Reichenbach and Mitra, 2016) have shown that, most women who tend to visit unqualified TBAs tend to have a higher risk of stillbirth, maternal mortality and complications during labor.

The current study sought to investigate the reasons why mothers would tend to deliver at homes with TBAs rather than at the hospital. The reviewed literature above shows that, home deliveries is still a nuisance despite the efforts of governments and other stakeholders. The risk associated with these home deliveries notwithstanding seems not to deter the mothers from delivering at home.

CHAPTER THREE

METHODOLOGY

3.1 Study Design

The study was a descriptive cross-sectional survey with quantitative data collecting approach. This research design was generated unswervingly from the study questions and was also created on the true reason for the investigation. The study design was a collection of rational actions employed by the principal investigator to answer the study question (Brink & Eva, 2009). This project was chosen due to its suitability for one-time, non-cause-effect research. The concept behind this study technique was that a cross-sectional approach allowed for the simultaneous investigation of exposure and consequences. Furthermore, cross-sectional research is descriptive in character and is observational in nature. Using this approach, the researcher was able to collect the data from the study population without having to change the variables. As a result, this kind of study was used to define the features of the population. This cross-sectional research method was adopted in this study because it allowed for a quick assessment of the strength of the correlation between a factor and a specific health outcome as long as the relationship existed within the study population at the time. A cross-sectional approach is the most basic sort of descriptive epidemiology that may be performed on community representative samples (Bonita et al., 2006).

3.2 Data Collection Instrument

A structured interviewer-administered questionnaire developed from prior research was used to collect data (Ebuehi and Akintujoye, 2012). The information acquired included respondents' sociodemographic characteristics, awareness of TBAs and their duties, and attitudes toward and usage of TBA services in the North Tongu District.

3.3 Data Collection Procedure

Self-administered questionnaires were used to obtain primary data from respondents in health care institutions. Eight (8) research assistants with extensive understanding of the study issue under examination and previous experience with similar data collecting activities were trained to assist with data gathering. The research aides were chosen based on their capacity to speak and comprehend the native tongue in the study region (North Tongu District), as well as their understanding of the geographical context (Akan, Ewe, and Krobo), culture, religion, and traditions of the people in the study area. The research assistants received training to improve their data collection abilities in terms of sampling process, obtaining informed permission, and questionnaire administration. All COVID-19 protocols were strictly followed.

3.4 Study Population

The population of a study refers to the whole group of individuals or items that are of importance to the principal investigator and meet the standards that the researcher wishes to examine (Brink & Eva, 2009). It involves the individuals in a cluster on which research is being conducted or data is being gathered in order to make data-driven decisions. The study was carried out in the North Tongu District among pregnant women visiting prenatal clinics at several health institutions (Juapong Health Centre, Volo Health Centre, Aveyime CHPS, Torgome CHPS, Alabonu CHPS, and Doffor-Adidome Health Centre).

3.5. Study Variables

Table 3.1 Description of Response Variable of Interest

Variable	Operational Description	Scale of Measurement	Levels
Used and currently using	Have you ever used TBA services in the past and currently using their services again?	Binary	Yes or No

Table 3.2 Description of Explanatory Variables of Interest

Variable	Operational Description	Scale of Measurement	Levels
Current Age	Age group	Continuous	N/A
Educational Level	Educational level of participant	Categorical	Primary Junior High Senior High Tertiary None
Ethnicity	What ethnic group do you belong?	Categorical	Akan Ga/Ga Adangbe Krobo Ewe Others (specified)

Marital Status	What is your marital status?	Categorical	Single Married Divorced Separated Widowed
Occupation/Skill	What is your occupation/skill level? Please put under any one of the categories below.	Categorical	Skilled Semi-skilled Unskilled Unemployed
Knowledge of TBAs	Have you ever heard of Traditional Birth Attendants?	Binary	Yes or No
Used TBA services in the past	Have you ever used the services of TBAs in the past?	Binary	Yes or No
Currently using TBA services	Are you currently using TBA services?	Binary	Yes or No
Ban TBA services	TBA services should be banned	Binary	Yes or No

3.6 Sample Size Estimation

A sample is defined as a portion or proportion of a whole, or as a subset of a larger set chosen by the researcher to engage in a research project. A sample is therefore a selected

collection of items or units of analysis drawn from a defined population (Brink & Eva, 2009). The sample size refers to the number of people in a specific research study about whom the researcher desires to learn more. The sample size choice entails establishing the number of persons who must be researched in order for the researcher to gather enough reliable responses to make a recommended decision (Macnee and McCabe, 2008). The sample must be scientifically drawn to actually possess the same characteristics as the defined study population. Using a sample in a study was important because it was impossible to select all members of the study population to take part in the research. The accessible population were the pregnant women who resides in the North Tongu District who either attend antenatal clinic in any of the selected health facilities or not but would be present in the district during the period of study. Four hundred and forty-two (442) women were enrolled for the study.

3.6.1 Sample size calculation

A study's sample is a subset of the population picked to make inferences or predictions to the broader population.

The Cochran's formula was used in calculating the sample size as shown below;

$$n = \frac{Z^2 \times pq}{e^2}$$

Where,

n = sample size (Cochran, 1977)

Z = the z-score that corresponds with 95% confidence interval which is 1.96

p = Proportion of the pregnant women within the North Tongu District

q = Proportion of women who are not pregnant within the North Tongu District

e = Margin of error will be set at 5% (0.05)

therefore, using the 50 by 50 formular

$$n = \frac{1.96^2 \times (0.5)(0.5)}{0.05^2} = 384$$

A non-response rate of 15 % was applied.

$$15\% \text{ of } 384 = 58$$

Hence a total of 442 participants was used

3.7 Sampling Technique

According to Bless et al., (2006), sampling is a methodological accounting process used to rationalize information collecting and to choose a limited number of products, individuals, or measures which is known as the sample where genuine data may be acquired in an acceptable manner. Sampling is a viable data gathering approach when the group under study is either immeasurable or very large, making a study of all population rudiments impractical (Bless et al., 2006). The reason for simple random sampling is to allow the researcher to identify the features of the population by seeing only a subset of the group under study. A total of twenty health facilities (consisting of five health centers and fifteen CHPs compounds) were identified in the district. A multistage sampling method was used to select facilities for the research study:

- Stage 1: the names of the health facilities within the district was written on a piece of paper and placed in a ballot out of which six (6) health facilities were selected.

Three health centers and three CHPS compounds were attained by simple random selection.

- Stage 2: 74 pregnant women from each of the 6 selected health facility offering antenatal clinic were recruited using a systematic sampling method until the desired sample was obtained. The first women were selected to respond to the questionnaire, the second women were skipped and the third women was also selected. In this manner every alternate ANC attendant was taken to participate in the research.
- To attain the required sample size, two (2) would be deducted from the CHPS zones sample size since they do not have a large number of populations.

3.8 Study Site

The district has a total of 20 health facilities which consist of five (5) health centers and fifteen CHPS compounds. From the total number of health facilities, six (6) were chosen for the study. The first is the Juapong Health Center which is the largest of the facilities visited. It is located directly opposite the main highway to Battor. They have an OPD, Dispensary and a delivery room. The Volo Health Center is the second largest which is located on the same highway as the Juapong Health Center only further. The third is the Doffor-Adidome which is located in Doffor. The facility has a small OPD and a few staff who stay on the site of the facility. The various CHPS compounds (Aveyime CHPS, Torgome CHPS and Alabonu CHPS) have structures where they carry out basic healthcare practices such as OPD and ANC activities. They have a midwife and a few staff nurses and CHNS available who stay close to the facilities hence they are able to administer care when needed.

3.9 Inclusion Criteria

Participants who were enrolled into the study met all the following criteria:

- Women who were pregnant and reside in the North Tongu District during the period of data collection.
- Pregnant women in the North Tongu District who were available at the time of data collection and have consented to take part in the study.
- Pregnant women who reside in North Tongu and are within the ages of 15 to 45 years.

3.10 Exclusion Criteria

The following were excluded from participating in the study;

- Women who were pregnant and do not reside in the North Tongu District during the period of data collection.
- Pregnant women in the North Tongu District who were not available at the time of data collection and have consented to take part in the study.
- Pregnant women who reside in North Tongu and are below or above ages of 15 to 45 years.

3.11 Pre-Testing

The research assistants were pre-tested the day after they were trained. To pre-test the data collecting technique, the data collectors were divided into two (2) groups of two (2) people each. Pre-testing was carried out at two health facilities that were not among the six (6) selected health institutions for the research. The questionnaire was pre-tested on fifteen (15) pregnant women visiting an antenatal clinic at each of the two (2) health institutions.

Following the pre-test, any discovered ambiguity was resolved and adjusted as needed before actual data collection began.

3.12 Data Handling

The data was confirmed for consistency, coded and keyed into Stata 17. The principal investigator was in charge of data handling. All data set and work was sent to the investigator by email and external drive which was protected.

3.13 Data Analysis and Presentation of Results

The data was captured into an MS Excel spreadsheet, cleaned and then transferred to STATA 17 for analysis. Descriptive techniques such as the bar, pie graph, frequencies and percentages were used for describing the categorical variables. The first objective sought to assess the knowledge level of expectant mothers on TBA services in the North Tongu District. Participant's knowledge scores were generated by marking each response as "correct" or "not-correct". The percentage correct responses were used for describing participant performance on each question asked. This was supported with a 95% confidence interval. The knowledge scores were categorized using the Bloom cut-off point (Olum *et al.*, 2020).

The second objective sought to examine the perception of expectant mothers towards TBAs services in the North Tongu District. This was analyzed used frequencies and percentages.

The third objective assessed the utilization level of TBA services and factors influencing its patronage among women in the North Tongu District. The outcome variable was TBA Service Uptake measures as "No" or "Yes". The Pearson and Fisher's exact test were used for the bivariate analysis. The associations with $p\text{-value} \leq 0.20$ were selected for a

multivariate analysis. A multivariate logistic regression analysis was adopted for modelling the association between the covariates and TBA Service Uptake with 95% confidence interval.

3.14 Ethical Consideration

A research project is an ethically charged process. However, the researcher conducted this study while keeping ethical concerns in mind. The researcher will be guided by the three core ethical values of respect for individuals, beneficence, and justice. These principles are founded on human rights, such as the right to self-determination, privacy, anonymity, confidentiality, fair treatment, and protection from discomfort and injury, which must be respected during any study endeavor. All research participants in this study were advised that they might withdraw from the study at any time, that they could refuse to reveal information, and that they could request clarification regarding the study.

The Ensign College of Public Health's ethical clearance committee was approached for approval. The Ensign College of Public Health will also provide an introduction letter. This letter was delivered to the North Tongu District Director of Health Services in order to obtain authorization to conduct the study. Before administering the data instrument, the chiefs in the research villages provided verbal consent, and the study respondents provided informed consent. To preserve anonymity, the researcher made certain that no information submitted by a participant throughout the course of the study was leaked or made available to anybody other than the study's supervisor. In addition, the completed dissertation did not mention any of the names.

3.15 Validity and Reliability

Establishing a study's validity and reliability increases its legitimacy, making it a helpful document for policy development, program creation, and other action. The accuracy,

precision, and consistency of the measuring technique are the emphasis of validity and dependability. To establish the research's reliability and validity, the steps used includes:

- Developing objectives that accurately represent the study's emphasis and purpose.
- Examine relevant material to ensure a realistic dialogue.
- Colleagues and my supervisor reviewed the first draft of my self-constructed questionnaire for content validity.
- The self-constructed interview guide was tried and tested using 30 randomly selected pregnant women attending antenatal clinic in 2 selected health facilities in the study area. The pre-test identified any ambiguity and hence helped to, address and amend the questions to make them appropriate before the final data collection.

3.16 Limitations of The Study

The nature of the study does not allow for analyzing behavior over a period of time as the respondents could have a change of mind even after the data collection. Again, the study could not determine cause and effect due to the use of the cross-sectional study design.

3.17 Assumptions

It was expected that the study would reveal the perception of pregnant women on TBAs services in the North Tongu District. Also, findings of the study should help pregnant women have in depth knowledge about pregnancy, labour and delivery complications and acknowledge the importance of utilizing the services of the skilled birth attendants.

The findings would necessitate for implementation of policies by the health authorities and systems at large on TBAs' services to improve within permissible standards. It is hoped that the findings of this study translate into improved maternal and neonatal health outcomes in the North Tongu District and other relevant settings in the country at large.

CHAPTER FOUR

RESULTS

4.1 Socio-Demographic Information

Approximately 43%(n=190), 34%(n=151) and 18%(n=78) belonged to age groups “26-35”, “16-25” and “36-40” years of age respectively. The majority of them were married (n=391; 88.5%). Most 93%(n=417) of them professed faith in Christianity. Approximately 61%(n=268) of the participants were from Mole Dagbani ethnic group. Those from other ethnic groups include Nzema and Guan [Table 4.1].

Table 4.1: Socio-demographic characteristics

Characteristic	Frequency	Percentage (%)
Age (years)		
<15	8	1.8
16-25	151	34.2
26-35	190	43.0
36-40	78	17.6
41-45	15	3.4
Marital Status		
Never Married/Divorced	51	11.5
Married/Cohabiting	391	88.5
Religion		
Christian	417	94.3
Muslim	21	4.8
Traditional	4	0.9
Ethnicity		
Akan	25	5.7
Ga Adangbe	97	22.0
Ewe	16	3.6
Mole Dagbani	268	60.6

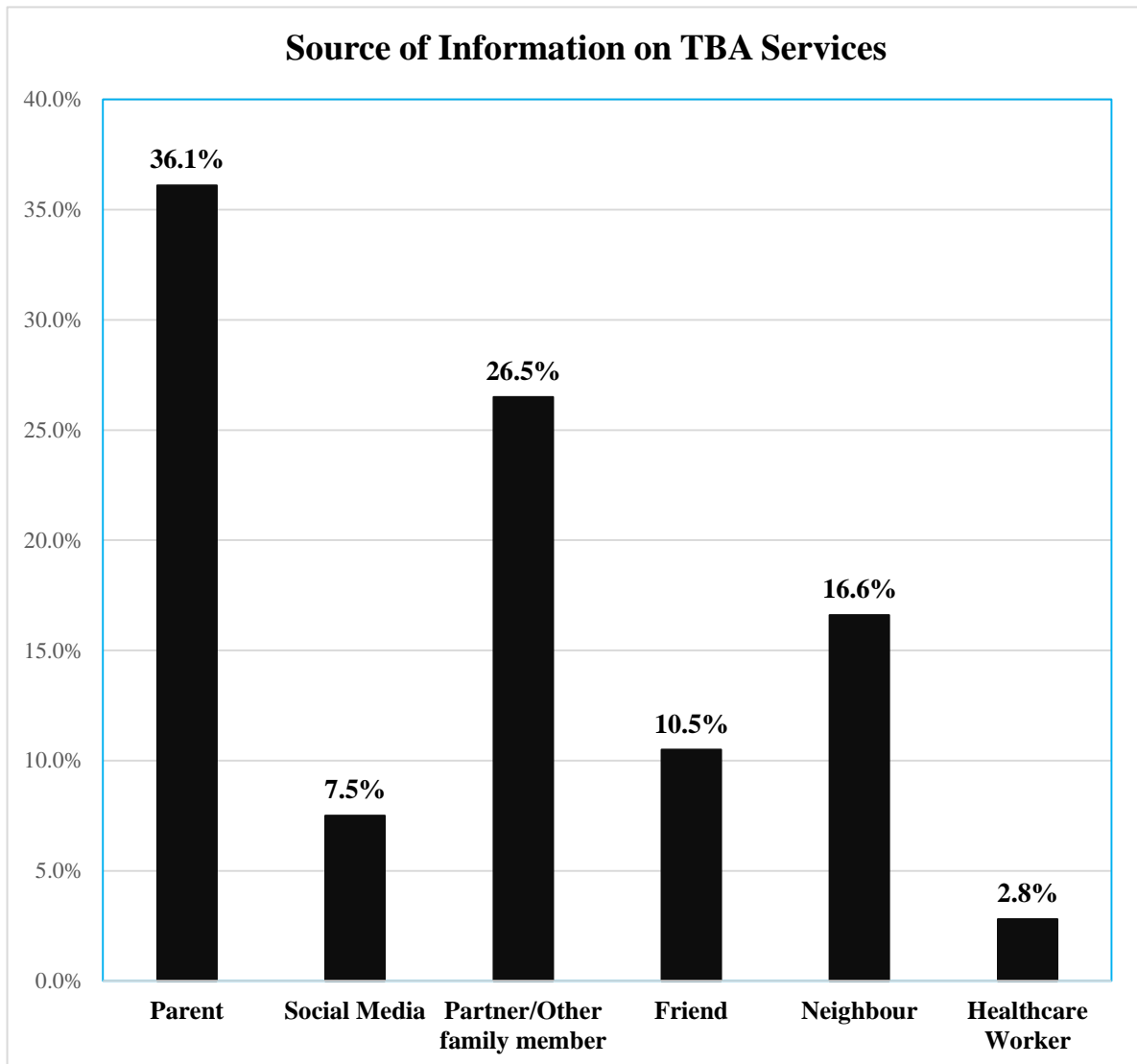
Others (Nzema & Guan)	36	8.1
Education Background		
No Formal Education	52	11.8
Background		
Primary	107	24.2
Junior High School	167	37.8
Senior High /Vocational School	83	18.8
Has a valid health insurance		
Yes	424	95.9
No	18	4.1
Occupation		
Farming	73	16.5
Trading	11	2.5
Teaching	187	42.3
Students	17	3.9
Unemployed	154	34.8
Gravida		
1 st Pregnancy	124	28.1
More than one	318	71.9
Parity		
1	124	28.1
2	106	24.0
3	103	23.3
4	55	12.4
5 and above	54	12.2

4.2: The knowledge level of expectant mothers on TBA services in the North Tongu

District

About 36%(n=159), 27%(n=119) and 17%(n=75) mentioned parents, partners or other family member and neighbors as their sources of information about traditional birth attendant services.

Figure 4.1 Sources of Information on TBA services



Knowledge on TBAs and their Services

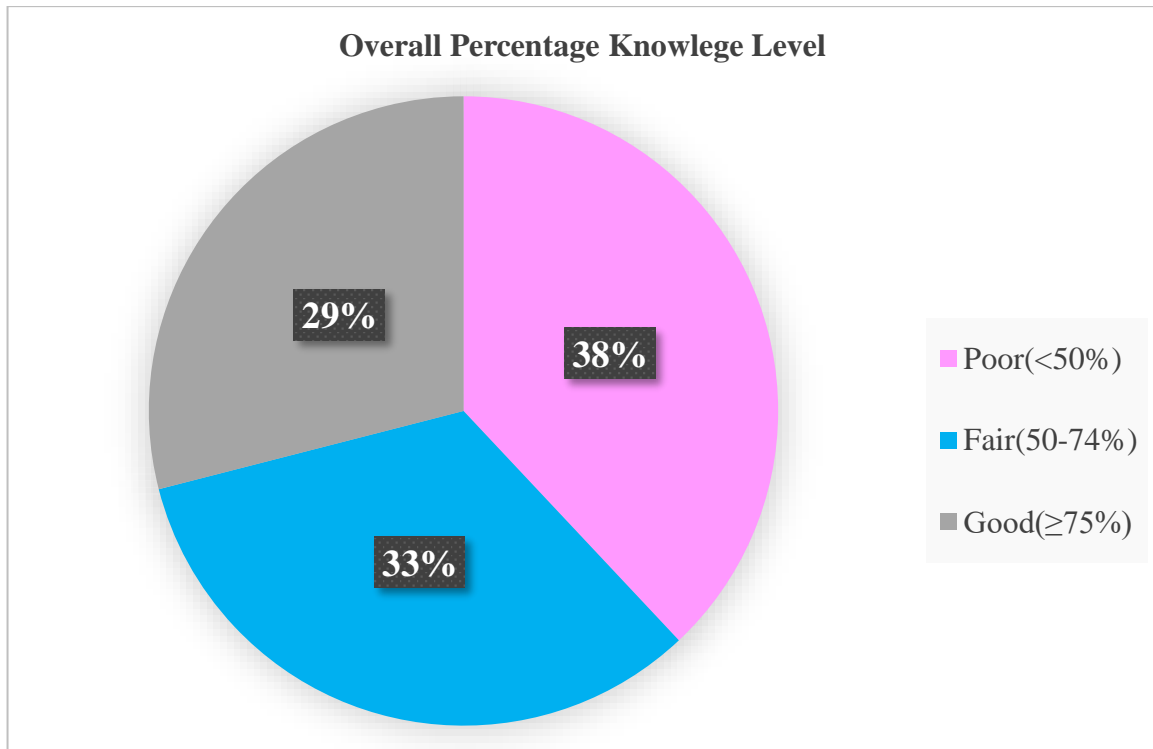
The performance of the study participants according to the subject areas was examined. The theme that informed the questions were (1) the functions of traditional birth attendants and (2) the complications associated with traditional birth attendants' service. Participants performed poorly on questions 3[Gynaecological Surgeries] (42.8%; 95% CI=38.6-62.7) and 5[Antenatal Services] (48.5%; 95% CI=39.5-60.8). [Table 4.2]

Table 4.2: Percentage of correct responses according to the question subjects

Knowledge Areas	Percentage Correct Response		95% Confidence Interval
	N	%	
<i>Functions of Traditional Birth Attendant</i>			
1. Taking Normal Delivery	358	81.3	68.6- 91.3
2. Perform Cesarean Sections	223	50.6	46.9-71.8
3. Gynaecological Surgeries	189	42.8	38.6-62.7
4. Family Planning Services	256	58.2	39.1-67.8
5. Antenatal Services	214	48.5	39.5-60.8
<i>Complications associated with Traditional Birth Attendant's service</i>			
6. Excessive/prolonged bleeding	123	28.2	20.8-36.4
7. Infections	172	39.3	18.5-41.2
8. Damage to reproductive organs	217	48.6	39.8-61.1
9. Transfer of witchcraft	229	51.8	45.8-69.9
10. Possible death of mother and/or baby	354	80.2	60.8-90.7
N=Frequency	%=Percentage		

The overall knowledge status was classified using Bloom's cut-off. Approximately 38%(n=168), 33%(n=146) and 29%(n=128) of the study participants had poor, fair and good knowledge respectively.

Figure 4.2 Overall Percentage Knowledge Level



4.3: The perception of expectant mothers towards TBAs services in the North

Tongu District

The perception of the study participants concerning TBA services was explored. Approximately, 63%, 58% and 67% of the participants hold perceptions that Traditional Birth Attendant's services achieve desired results for clients, the users of traditional birth attendants' services are satisfied with their services and traditional birth attendants will perform better with formal training respectively.

Table 4.3: The perception of study participants regarding TBAs services

#	Perception	No (%)	Yes (%)
1	Traditional Birth Attendant's services achieve desired results for clients	164(37.1)	278(62.9)
2	The users of Traditional Birth Attendants services are satisfied with their services	186(42.1)	256(57.9)
3	Traditional Birth Attendants will perform better with formal training	147(33.3)	295(66.7)
4	Traditional Birth Attendants should be banned	313(70.8)	129(29.2)
5	Traditional Birth Attendants are licensed and permitted to offer their services	39(8.8)	403(91.2)
6	Traditional Birth Attendants services usually causes complications	298(67.4)	144(32.6)
7	Traditional Birth Attendants have adequate knowledge and skills to care for pregnant women	70(15.8)	372(84.2)
8	Practices of Traditional Birth Attendants are adequately hygienic	75(17.0)	367(83.0)

4.4: The utilization level of TBA services and factors influencing its patronage among women in the North Tongu District

The study participants were asked whether they had used a TBA service before. Majority of them said they have ever used TBA service in the past (n=250; 56.6%).

Table 4.4 Uptake of TBA services

TBA Uptake Status	Frequency	Percentage (%)
TBA Service Uptake		
No	192	43.4
Yes	250	56.6

Bivariate analysis showing an association between socio-demographic characteristics and TBA Services Uptake

A bivariate analysis was conducted to examine the socio-demographic factors associated with TBA Service uptake using Fisher's exact or Pearson Chi-square test depending on the values in the cells. The alpha level was 0.05. The results show that participants' age(p=0.011), marital status(p=0.032), gravida(p<0.001) and parity(p<0.001) were significantly associated with TBA Service Uptake.

Table 4.5 Bivariate analysis of association between socio-demographics and TBA services uptake

Variable	TBA Services Uptake		p-Value
	No (%)	Yes (%)	
Age (years)			0.011
<15	1(0.4)	7(2.8)	
16-25	52(27.1)	99(39.6)	
26-35	94(49.0)	96(38.4)	
36-40	36(18.8)	42(16.8)	
41-45	9(4.7)	6(2.4)	
Marital Status			0.032
Never Married/Divorced	15(7.8)	36(14.4)	
Married/Cohabiting	177(92.2)	214(85.6)	
Religion			0.075
Christian	176(91.7)	241(96.4)	
Muslim	14(7.3)	7(2.8)	
Traditional	2(1.0)	2(0.80)	
Ethnicity			0.147
Akan	10(5.2)	15(6.0)	
Ga Adangbe	43(22.4)	54(21.6)	
Ewe	10(5.2)	6(2.4)	
Mole Dagbani	108(56.3)	160(64.0)	
Other	21(10.9)	15(6.0)	
Education Background			0.06
No Formal Education Background	50(26.0)	57(22.8)	
Primary	77(40.1)	91(36.4)	
Junior High School	2(1.0)	29(0.80)	
Senior High /Vocational School	27(14.1)	51(20.4)	
Tertiary	8(4.2)	25(10.0)	
Has a valid health insurance			0.38
Yes	186(96.9)	238(95.2)	
No	6(3.1)	12(4.8)	

Occupation			0.065
Farming	43(22.4)	30(12.0)	
Trading	9(4.7)	2(0.80)	
Teaching	82(42.7)	105(42.0)	
Unemployed	6(31.1)	11(4.4)	
Unemployed	52(27.1)	102(40.8)	
Gravida			0.000
1 st Pregnancy	31(16.2)	93(37.2)	
More than one	161(83.9)	157(62.8)	
Parity			0.000
1	31(61.2)	93(37.2)	
2	43(22.4)	63(25.2)	
3	48(25.0)	55(22.0)	
4	31(16.2)	24(9.6)	
5 and above	39(20.3)	15(6.0)	

Bivariate analysis showing an association between participant perception and TBA

Services Uptake

Similarly, a bivariate analysis was conducted to examine the participant perceptions associated with TBA Service uptake using Fisher's exact or Pearson Chi-square test depending on the values in the cells. The alpha level was 0.05. All the constructs for participant perceptions construct were statistically significant. These include: traditional birth attendant's services achieve desired results for clients ($p < 0.001$), the users of traditional birth attendants' services are satisfied with their services ($p < 0.001$), and traditional birth attendants will perform better with formal training ($p < 0.001$).

Table 4.6 Bivariate analysis showing an association between participant perception and TBA Services Uptake

Variable	TBA Services Uptake		p-Value
	No (%)	Yes (%)	
Traditional Birth Attendant's services achieve desired results for clients			0.000
No	163(84.9)	1(0.4)	
Yes	29(15.1)	249(99.6)	
The users of Traditional Birth Attendants services are satisfied with their services			0.000
No	175(91.1)	11(4.4)	
Yes	17(8.8)	239(95.6)	
Traditional Birth Attendants will perform better with formal training			0.000
No	146(76.0)	1(0.40)	
Yes	46(24.0)	249(99.6)	
Traditional Birth Attendants should be banned			0.000
No	82(42.7)	231(92.4)	
Yes	110(57.3)	19(7.6)	
Traditional Birth Attendants are licensed and permitted to offer their services			0.000
No	29(15.1)	10(4.0)	
Yes	163(84.9)	240(96.0)	
Traditional Birth Attendants services usually causes complications			0.000
No	76(39.6)	222(88.8)	
Yes	116(60.4)	28(11.20)	
Traditional Birth Attendants have adequate knowledge and skills to care for pregnant women			0.000
No	59(30.7)	11(4.4)	

Yes	133(69.3)	239(95.6)	
Practices of Traditional Birth Attendants are adequately hygienic			0.000
No	46(24.0)	10(4.0)	
Yes	146(76.0)	240(96.0)	

Multivariate analysis showing an association between participant characteristics and TBA Services Uptake

A multivariate logistic regression analysis was conducted to model the association between participant characteristics and TBA Services Uptake using a 95% confidence interval. Holding other factors constant, having more than one gravida reduced the participants' odds for TBA Service Uptake (aOR=0.38; 95% CI=0.23-0.62). Participants hold the perception that TBA services were more likely to achieve the desired results for clients (aOR=1.40; 95% CI=1.10-5.80).

Table 4.7 Multivariate analysis showing an association between participant characteristics and TBA Services Uptake

Variable	Unadjusted		Adjusted	
	OR	95% CI	OR	95% CI
Age (years)				
<15	<i>Ref</i>		<i>Ref</i>	
16-25	0.27	0.03-2.27	0.52	0.06-4.50
26-35	0.14	0.02-1.21	0.35	0.04-3.12
36-40	0.17	0.02-1.41	0.45	0.05-4.09
41-45	0.09	0.01-0.98	0.28	0.03-3.15
Marital Status				
Never Married/Divorced	<i>Ref</i>		<i>Ref</i>	
Married/Cohabiting	0.50	0.27-0.95	0.78	0.40-1.55
Gravida				
1 st Pregnancy	<i>Ref</i>		<i>Ref</i>	
More than one	0.33	0.20-0.52	0.38	0.23-0.62*
Parity				
1	<i>Ref</i>		<i>Ref</i>	
2	0.49	0.28-0.86	4.15	1.92-8.96*
3	0.38	0.22-0.70	3.13	1.50-6.53*
4	0.26	0.13-0.50	2.08	0.93-4.65
5 and above	0.13	0.06- 0.26	1	

Traditional Birth Attendant's services achieve desired results for clients

No	<i>Ref</i>		<i>Ref</i>	
Yes	1.39	1.08- 5.74	1.40	1.10-5.80*

The users of Traditional Birth Attendants services are satisfied with their services

No	<i>Ref</i>		<i>Ref</i>	
Yes	2.23	1.02-8.91	2.33	1.04-8.93*

Traditional Birth Attendants will perform better with formal training

No	<i>Ref</i>		<i>Ref</i>	
Yes	7.90	1.08-15.79	6.71	1.09-16.53*

Traditional Birth Attendants should be banned

No	<i>Ref</i>		<i>Ref</i>	
Yes	0.06	0.01-0.10	0.05	0.10-0.11*

Traditional Birth Attendants are licensed and permitted to offer their services

No	<i>Ref</i>		<i>Ref</i>	
Yes	4.26	2.05-9.01	4.24	2.04-8.11*

Traditional Birth Attendants services usually causes complications

No	<i>Ref</i>		<i>Ref</i>	
----	------------	--	------------	--

Yes	0.08	0.02-0.13	0.11	0.02-0.15*
Traditional Birth Attendants have adequate knowledge and skills to care for pregnant women				
No	<i>Ref</i>		<i>Ref</i>	
Yes	9.63	4.89-18.98	9.53	4.52-18.96*
Practices of Traditional Birth Attendants are adequately hygienic				
No	<i>Ref</i>		<i>Ref</i>	
Yes	10.86	5.53-21.33	10.87	5.52-21.35*

CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter includes the discussions on the study results. The discussions are organized according to the study results.

5.2 The knowledge level of expectant mothers on TBA services in the North Tongu District

The study examined the participant's knowledge of traditional birth attendant (TBA) services. The current study results show that only 29% of the women had satisfactory knowledge about TBA services. This finding is not of a surprise since 36%, 27% and 17% of the participants cited parent, partner and neighbour as their source of information concerning TBA services. Only 3% mentioned healthcare workers. Generally, acquiring information about health from a non-healthcare worker who is without relevant education background can be limiting.

The specific knowledge areas included the functions of TBAs. Approximately, 49% of the respondents thought TBAs perform caesarian sections, as compared to the 3% found in Ogun State in Nigeria (Olufunke and Akintujoye, 2012). Also, 57% of the participants thought TBAs could perform gynecological surgery, compared to the 7% in the Nigerian study. About 51% of them indicated that TBAs provide ANC services. The differences in knowledge level could be accounted for by participant education background. Whereas 65% of the study participants in the current study had no formal or primary school education, about 74% of their counterparts in the Nigerian study had senior high school or tertiary level education (Olufunke and Akintujoye, 2012).

Similarly, the participants had poor knowledge in the areas regarding complications of the TBA services. The areas included excessive or prolonged bleeding, infections, damage to reproductive organs and transfer of witchcraft (Olufunke and Akintujoye, 2012). These findings are similar and have been confirmed by a study in Ghana that assessed TBA delivery complications (Smith *et al.*, 2000). The fact that they have poor knowledge in TBA associated delivery complications may increase their patronage of TBA services. The women in the North Tongu District should be educated on TBA services and then encouraged to access formalized care.

5.3: The perception of expectant mothers towards TBAs services in the North

Tongu District

About 63% of the study participants in the current study had the perception that TBAs achieve desired results for the clients. A study conducted in the Upper West Region of Ghana indicated TBAs have skills and abilities to perform delivery and post-partum functions that local nurses had not been exposed to (Rishworth *et al.*, 2016).

Notably, only 33% of the study participants held the view that TBA services cause complications. This was contrary to a study in Kenya that found that women who used health facilities were more likely to suffer obstetric complications than counterparts who were assisted by TBAs (Liambila and Kuria, 2014). This difference in findings need to be further investigated. TBA services, in general are more predisposed to complications due to the low-skill level of the providers and is quite a common phenomenon in Ghana.

The current study results show that 67% of the study participants perceived that TBAs will perform better when given formal training. An outcome evaluation on the impact of formal training on TBAs in Tano and Kintampo in Ghana demonstrated that formal training improves outcomes such as retained placenta and intrapartum excessive bleeding.

However, the training increased the pregnant woman's odds for labouring for over 18 hours (Smith *et al.*, 2000).

Again, about 29% of the women in the current study want TBAs to be banned. The Zambian government banned traditional birth attendants in 2010 (Cheelo, Nzala and Zulu, 2016). Consequently, complications were detected early, health facility births increased, HIV/AIDS incidence and maternal mortality cascaded. On the other hand, the cost of delivery hiked due to high cost of travelling and using a health facility, so some women returned to receiving the TBA services (Cheelo, Nzala and Zulu, 2016).

In relation to the above, an assessment of the policy that forbids TBAs from carrying out deliveries was conducted. The findings showed that poor road infrastructure, high transport cost, poor treatment at the health facility, and the inability of the local nurses to provide them with the services needed on time threatens the successful implementation of the policy (Rishworth *et al.*, 2016). In contrast, 91% of the study participants held the perception that TBAs are licensed and permitted to offer their services in Ghana. There is thus a need for further studies to ascertain the underlying reasons for this misconstrued perception amongst pregnant women.

5.4 The utilization level of TBA services and factors influencing its patronage among women in the North Tongu District

The study assessed the determinants of TBA service uptake among participating women in the North Tongu District. The determinants include participant gravida, parity and participant perceptions.

The current study results show that having more than one pregnancy (gravida) reduced the participants odds for TBA service uptake. This findings conflicts with that found in Ogun

State in Nigeria. The study did not find significant association between gravida and TBA service (Olufunke and Akintujoye, 2012). Further study should be conducted to explain the findings in the current study.

The study also found that the participants with higher parity were more likely to opt for TBA services. This can be explained by the high cost of travelling to a healthcare facility and the easy access to TBA services (Rishworth *et al.*, 2016). In addition, cultural beliefs and the treatment received during previous birth may account for the decision to patronage TBA services (Allou, 2018).

The study participants with the perception that TBAs would perform better with formal training were more likely to receive the services of a TBA, compared to those who disagreed that formal training would improve TBA services. This suggests the awareness of the women that TBAs are lacking in certain skills and ability, however, there is a need for follow research to further understand why they would patronize their services despite this awareness. The perception may have emanated from a previous intervention by the Ghana Ministry of Health in the 1990s to assist TBAs with basic training and resources to perform deliveries (Rishworth *et al.*, 2016). In supporting evidence, findings from a case control study conducted in India showed lower rates of mortality from postnatal asphyxia and atelectasis for trained TBAs than untrained TBAs (Smith *et al.*, 2000).

The participants who opined that TBAs should be banned were less likely to use TBA services. These people might have had bad experiences with TBAs or have access to the skilled birth attendants (SBAs). Also, it also suggests that they are not aware that TBA assisted deliveries have already been banned in Ghana (Rishworth *et al.*, 2016).

Notably, participants who think that TBAs are licensed and permitted to offer their services had higher odds for using TBA services. Currently, the Ghanaian government does not

issue licenses to TBA, rather it forbids them from carrying out delivering. It is therefore critical to educate the women on this for them to make appropriate health seeking decisions towards TBA services.

The women who hold the perception that TBA service-use causes complications were less likely to use the services. There have been instances where TBA services have been linked with complications such as excessive bleeding, fever and prolonged labour (Smith *et al.*, 2000).

Participants who held the perception that TBAs have adequate knowledge and skills to care for pregnant women were more likely to accept TBA services. Studies on the other hand have shown that untrained TBAs lack skills in many areas of reproductive health. For instance a study conducted in Ibadan in Nigeria argues that TBAs do not have “adequate skills to recognize and treat complications, delay referral to modern health care facilities in case of complications”(Ogunyomi and Ndikom, 2016). These women thus patronize TBA services due to unfounded perceptions and thus need further education on the subject matter to debunk these perceptions.

Last, the current study found that participants who consider TBAs to be adequately hygienic were more likely to use TBA services. However, one compelling argument against TBAs is their unhygienic practices (Ogunyomi and Ndikom, 2016). In the Nigerian study, only 19% of the TBA service users mentioned that TBAs used sterilized instrument(Ogunyomi and Ndikom, 2016). In addition, the country of Zambia banned TBA services partly because of unhygienic practices and the evaluators also saw a decline in HIV/AIDS(Cheelo, Nzala and Zulu, 2016). It is therefore astonishing that some of the study participants perceive TBAs to be adequately hygienic. Again, there is need for

further awareness creation on the subject matter to help debunk these perceptions should we want to increase women's uptake of skilled delivery services.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Summary

Approximately 29% of the study participants had satisfactory knowledge of TBAs and their services. About 36%, 27% and 17% mentioned parents, partners or other family member and neighbors as their sources of information about traditional birth attendant services respectively. They have perceptions such as TBA services achieve desired results for clients (62.9%), the users of Traditional Birth Attendants services are satisfied with their services (57.9%). Approximately 57% have used TBA service before. The predictors of TBA service uptake were gravida, parity and participant perceptions.

6.2 Conclusions

- The fact that only 29% of the participants had satisfactory knowledge concerning the functions and complications associated with TBA services suggests that the women in North Tongu district may patronize TBA services that may be detrimental to their health.
- The majority of participants hold perceptions such as TBAs services achieve desired results for clients (62.9%), the users of TBA services are satisfied with their services (57.9%) and TBAs are licensed and permitted to offer their services (91.2%). These could influence their health seeking behaviour.
- Having 57% of the study participants indicating previous use of TBA services is high and should be addressed.
- The study also found that the participants with higher parity were more likely to opt for TBA services which can be explained by the challenges in accessing a health

facility. Also, cultural beliefs and the treatment received during previous birth may account for this.

- Participant's perception were significant predictors of TBA uptake. The perceptions are modifiable.

6.3 Recommendations

6.3.1: Practices

- Considering that participants' perceptions influence TBA service uptake, the District Health Directorate coupled with community groups such as churches, traditional leaders, and school should educate women against the use of TBA services.

6.3.2 Policy

- The current ban on TBA services within the country should be reinforced especially in the rural areas such as the North Tongu District.
- The District Health Directorate should liaise with the Chief and opinion leaders in the North Tongu District to curtail the activities of the TBAs so as to reinforce the government ban on TBA activities within the district.

6.3.3 Research

- Further research should also be done on assessing the impact of TBA services on the health of expectant mothers during utilization in the North Tongu District.

REFERENCES

- Adatara, P., Afaya, A., Baku, E.A., Salia, S.M. and Asempah, A., 2018. Perspective of traditional birth attendants on their experiences and roles in maternal health care in rural areas of northern Ghana. *International journal of reproductive medicine*, 2018.
- Allou, L.A., 2018. Factors influencing the utilization of TBA services by women in the Tolon district of the northern region of Ghana. *Scientific African*, 1, p.e00010
- American College of Obstetricians and Gynecologists. (2016). *Ob-gyns can prevent and manage obstetric lacerations during vaginal delivery, says new ACOG Practice Bulletin*. Retrieved February 16, 2017, from <http://www.acog.org/About-ACOG/News-Room/News-Releases/2016/Ob-Gyns-Can-Prevent-and-Manage-Obstetric-Lacerations>
- Anyait, A., Mukanga, D., Oundo, G. B., & Nuwaha, F. (2012). Predictors for health facility delivery in Busia district of Uganda: a cross sectional study. *BMC pregnancy and childbirth*, 12(1), 1-9.
- Asamoah, B.O., Moussa, K.M., Stafström, M. and Musinguzi, G., (2011). Distribution of causes of maternal mortality among different socio-demographic groups in Ghana; a descriptive study. *BMC Public Health*, 11(1), pp.1-10.
- Atuoye, K.N., Dixon, J., Rishworth, A., Galaa, S.Z., Boamah, S.A. and Luginaah, I., 2015. Can she make it? Transportation barriers to accessing maternal and child health care services in rural Ghana. *BMC health services research*, 15(1), pp.1-10.

- Awotunde, O.T., Awotunde, T.A., Fehintola, F.O., Adesina, S.A., Oladeji, O.A., Fehintola, A.O. and Ajala, D.E., (2017). Determinants of utilisation of traditional birth attendant services by pregnant women in Ogbomoso, Nigeria. *Int J Reprod Contracept Obstet Gynecol*, 6, pp.2684-2689.
- Aziato, L. and Omenyo, C. N. (2018) ‘Initiation of traditional birth attendants and their traditional and spiritual practices during pregnancy and childbirth in Ghana’, *BMC Pregnancy and Childbirth*, 18(1), pp. 1–10. doi: 10.1186/s12884-018-1691-7.
- Bazzano, A.N., Kirkwood, B., Tawiah-Agyemang, C., Owusu-Agyei, S. and Adongo, P., (2008). Social costs of skilled attendance at birth in rural Ghana. *International Journal of Gynecology & Obstetrics*, 102(1), pp.91-94.
- Becker, M.H., Maiman, L.A., Kirscht, J.P., Haefner, D.P. and Drachman, R.H., (1977). The health belief model and prediction of dietary compliance: A field experiment. *Journal of Health and Social behavior*, pp.348-366.
- Bless, C., Higson-Smith, C. and Kagee, A., (2006). *Fundamentals of social research methods: An African perspective*. Juta and Company Ltd.
- Bohren, M.A., Vogel, J.P., Hunter, E.C., Lutsiv, O., Makh, S.K., Souza, J.P., Aguiar, C., Coneglian, F.S., Diniz, A.L.A., Tunçalp, Ö. and Javadi, D., 2015. The mistreatment of women during childbirth in health facilities globally: a mixed-methods systematic review. *PLoS medicine*, 12(6), p.e1001847.
- Bonita, R., Beaglehole, R. and Kjellström, T., (2006). *Basic epidemiology*. World Health Organization. Brink, A. B. and Eva, H. D. (2009) ‘Monitoring 25 years of land cover change dynamics in Africa: A sample based remote sensing approach’, *Applied Geography*, 29(4), pp. 501–512. doi: 10.1016/j.apgeog.2008.10.004.

- Chi, P. C. and Urdal, H. (2018) 'The evolving role of traditional birth attendants in maternal health in post-conflict Africa: A qualitative study of Burundi and northern Uganda', *SAGE Open Medicine*, 6, p. 205031211775363. doi: 10.1177/2050312117753631.
- Cochran, W. C. (1977) 'Snedecor G W & Cochran W G. Statistical methods applied to experiments in agriculture and biology. 5th ed. Ames, Iowa: Iowa State University Press, 1956.', *Citation Classics*, 19(19), p. 1.
- Cotter, D., Turner, M.J., McAuliffe, F.M. and Higgins, M.F., (2016). Medical students learning experiences of the labour ward: a qualitative research study. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 206, pp.204-207.
- Cheelo, C., Nzala, S. and Zulu, J.M. (2016) 'Banning traditional birth attendants from conducting deliveries : experiences and effects of the ban in a rural district of Kazungula in Zambia', *BMC Pregnancy and Childbirth*, Vol. pp. 1–7. doi:10.1186/s12884-016-1111-9.
- Dako-Gyeke, P., Aikins, M., Aryeetey, R., Mccough, L. and Adongo, P.B., (2013). The influence of socio-cultural interpretations of pregnancy threats on health-seeking behavior among pregnant women in urban Accra, Ghana. *BMC Pregnancy and Childbirth*, 13(1), pp.1-12.
- Ebuehi, O. M. and Akintujoye, I. A. (2012) 'Perception and utilization of traditional birth attendants by pregnant women attending primary health care clinics in a rural Local Government Area in Ogun State, Nigeria', *International Journal of Women's Health*, 4(1), pp. 25–34. doi: 10.2147/ijwh.s23173.

- Eshiet, U.I., Jackson, I.L. and Akwaowoh, A.E., 2016. High patronage of traditional birth homes: a report from Akwa Ibom, Southern Nigeria. *American Journal of Health Policy and Management*, 1(1), pp.1-6.
- Ganle, J. K., Kombet, M. L., & Baatiema, L. (2019). Factors influencing the use of supervised delivery services in Garu-Tempene District, Ghana. *BMC pregnancy and childbirth*, pp. 19(1), 1-11.
- Gedefaw, A., Muluken, A. and Tesfaye, S. (2014) 'Factors associated with Institutional delivery service utilization among mothers in Bahir Dar City administration, Amhara region: A community based cross sectional study', *Reproductive Health*, Vol. pp. 1-7.
- Ghana Health Service., (2017). Ghana Health Demographic Survey
- Ghana Statistical Service, (2014). *Ghana Demographic Health Survey*
- GSS/GHS: Ghana Maternal Health Survey. (2017). Maryland: Ghana Statistical Service/Ghana Health Service/Macro international
- Iyanda, A.E. and Osayomi, T., (2019). Association between childbirth modes and neonatal and maternal deaths using a negative binomial model. *Women's Reproductive Health*, 6(2), pp.128-140.
- Kotoh, A. M., Aryeetey, G. C., & Van Der Geest, S. (2018). Factors that influence enrolment and retention in Ghana's National Health Insurance Scheme. *International journal of health policy and management*, 7(5), 443.
- Lane, K. and Garrod, J., (2016). The return of the traditional birth attendant. *Journal of Global Health*, pg. 6(2).

- Liambila, W.N. and Kuria, S.N. (2014) ‘Birth attendance and magnitude of obstetric complications in Western Kenya : a retrospective case – control study’, pp. 1–15.
- Macnee, C.L. and McCabe, S., (2008). *Understanding nursing research: Using research in evidence-based practice*. Lippincott Williams & Wilkins.
- Maiman, L.A. and Becker, M.H., (1974). The health belief model: Origins and correlates in psychological theory. *Health Education Monographs*, 2(4), pp.336-353.
- Malvasi, A., Trojano, G., Tinelli, A., Marinelli, E. and Zaami, S., (2021). Episiotomy: an informed consent proposal. *The Journal of Maternal-Fetal & Neonatal Medicine*, 34(6), pp.948-951.
- Moyer, C.A., Adongo, P.B., Aborigo, R.A., Hodgson, A., Engmann, C.M. and DeVries, R., 2014. “It’s up to the woman’s people”: how social factors influence facility-based delivery in Rural Northern Ghana. *Maternal and child health journal*, 18(1), pp.109-119.
- Ogunyomi, M.T. and Ndikom, C.M. (2016) ‘Perceived Factors Influencing the Utilization of Traditional Birth Attendants ’ Services in Akinyele Local Government , Ibadan , Nigeria’, 28(2), pp. 40–48.
- Olufunke, M. and Akintujoye, I. (2012) ‘Perception and utilization of traditional birth attendants by pregnant women attending primary health care clinics in a rural Local Government Area in Ogun State , Nigeria’, pp. 25–34.
- Oshonwoh, F.E., Nwakwuo, G.C. and Ekiyor, C.P., (2014). Traditional birth attendants and women’s health practices: A case study of Patani in Southern Nigeria. *Journal of Public Health and Epidemiology*, 6(8), pp.252-261.

- Owoseni, J.S. and Owumi, B.E., (2013). The impact of traditional birth attendants on maternal and child health in Ikole LGA of Ekiti State, Nigeria.
- Pyone, T., Adaji, S., Madaj, B., Woldetsadik, T. and Van Den Broek, N., 2014. Changing the role of the traditional birth attendant in Somaliland. *International Journal of Gynecology & Obstetrics*, 127(1), pp.41-46.
- Rishworth, A., Dixon, J., Luginaah, I., Mkandawire, P. and Tampah, C. (2016) “‘ I was on the way to the hospital but delivered in the bush ’’: Maternal health in Ghana ’ s Upper West Region in the context of a traditional birth attendants ’ ban’, *Social Science & Medicine*, 148, pp. 8–17. doi:10.1016/j.socscimed.2015.11.018.
- Sarker, B.K., Rahman, M., Rahman, T., Hossain, J., Reichenbach, L. and Mitra, D.K., 2016. Reasons for preference of home delivery with traditional birth attendants (TBAs) in rural Bangladesh: a qualitative exploration. *PloS one*, 11(1), p.e0146161.
- Liambila, W.N. and Kuria, S.N. (2014) ‘Birth attendance and magnitude of obstetric complications in Western Kenya : a retrospective case – control study’, pp. 1–15.
- Ogunyomi, M.T. and Ndikom, C.M. (2016) ‘Perceived Factors Influencing the Utilization of Traditional Birth Attendants ’ Services in Akinyele Local Government , Ibadan , Nigeria’, 28(2), pp. 40–48.
- Olufunke, M. and Akintujoye, I. (2012) ‘Perception and utilization of traditional birth attendants by pregnant women attending primary health care clinics in a rural Local Government Area in Ogun State , Nigeria’, pp. 25–34.
- Rishworth, A., Dixon, J., Luginaah, I., Mkandawire, P. and Tampah, C. (2016) “‘ I was on

the way to the hospital but delivered in the bush ”: Maternal health in Ghana ’ s Upper West Region in the context of a traditional birth attendants ’ ban’, *Social Science & Medicine*, 148, pp. 8–17. doi:10.1016/j.socscimed.2015.11.018.

Smith, J.B., Coleman, N.I.I.A., Fortney, J.A., Johnson, J.D., Dan, W. and Grey, T.W. (2000) ‘The impact of traditional birth attendant training on delivery complications in Ghana’, 15(3), pp. 326–331.

Sumankuuro, J., Mahama, M.Y., Crockett, J., Wang, S. and Young, J., (2019). Narratives on why pregnant women delay seeking maternal health care during delivery and obstetric complications in rural Ghana. *BMC Pregnancy and Childbirth*, 19(1), pp.1-13.

Ugboaja, J.O., Oguejiofor, C.B., Oranu, E.O. and Igwegbe, A.O., (2018). Factors associated with the use of traditional birth attendants in Nigeria: A secondary analysis of 2013 Nigeria national demography and health survey. *The Nigerian Journal of General Practice*, 16(2), p.45.

United Nations Population Fund. (1996). *Evaluation Findings: Support to traditional birth attendants* United Nations, MDG Report, 2014

Vieira, C., Portela, A., Miller, T., Coast, E., Leone, T. and Marston, C., (2012). Increasing the use of skilled health personnel where traditional birth attendants were providers of childbirth care: a systematic review. *PLoS One*, 7(10), p.e47946.

Warren, C.E., Njue, R., Ndwiga, C. and Abuya, T., 2017. Manifestations and drivers of mistreatment of women during childbirth in Kenya: implications for measurement and developing interventions. *BMC Pregnancy and Childbirth*, 17(1), pp.1-14.

World Health Organization, (2019). Trends in maternal mortality 2000 to 2017: estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division.

WHO. *Global Action for Skilled Attendants for Pregnant Women*. Geneva: WHO; (2013).

WHO, U. and UNFPA, (2019). Trends in maternal mortality: 2000 to 2017: estimates by WHO, UNICEF. *UNFPA, World Bank Group and the United Nations Population Division*.

World Health Organization, (2010). *World health statistics 2010*. World Health Organization.

Yakong, V.N., Rush, K.L., Bassett-Smith, J., Bottorff, J.L. and Robinson, C., (2010). Women's experiences of seeking reproductive health care in rural Ghana: challenges for maternal health service utilization. *Journal of Advanced Nursing*, 66(11), pp.2431-2441.

APPENDICES

APPENDIX I: ETHICAL CLEARANCE FROM ENSIGN GLOBAL COLLEGE



OUR REF: ENSIGN/IRB-GM/ET/169
YOUR REF:

December 17, 2021

INSTITUTIONAL REVIEW BOARD SECRETARIAT

Lucy Ama Dankwah
Ensign Global College,
Kpong

Dear Mrs. Dankwah,

ETHICAL CLEARANCE TO UNDERTAKE POSTGRADUATE RESEARCH

At the General Research Proposals Review Meeting of the *INSTITUTIONAL REVIEW BOARD (IRB)* of Ensign Global College held on Tuesday, November 30, 2021, your research proposal entitled "**The Perception and Utilization of Traditional Birth Attendants (TBA's) Services by Expectant Mothers at the North Tongu District in the Volta Region, Ghana**" was considered.

You have been granted Ethical Clearance to collect data for the said research under academic supervision within the IRB's specified frameworks and guidelines.

We wish you all the best.

Sincerely,

A handwritten signature in blue ink, appearing to read "Rebecca Acquah-Arhin", with a stylized flourish at the end.

Dr. (Mrs.) Rebecca Acquah-Arhin
IRB Chairperson

APPENDIX II: INFORMED CONSENT

THE PERCEPTION AND UTILIZATION OF TRADITIONAL BIRTH ATTENDANTS (TBA's) SERVICES BY EXPECTANT MOTHERS AT THE NORTH TONGU DISTRICT IN THE VOLTA REGION, GHANA

INTRODUCTION AND INFORMED CONSENT FORM TO PARTICIPANTS

Hello Madam,

My name is _____ I am a student at Ensign College of Public Health, Kpong. I am conducting research on the perception and utilization of traditional birth attendants' services by expectant mothers at the North Tongu District. This is an academic work which could be used to formulate a policy. I would very much appreciate it if you could spare some time to answer this questionnaire.

Health service providers have done a lot to offer maternal health services to pregnant women in Ghana yet most women, especially in the rural areas still utilize the services of (TBAs). The purpose of this study is to explore pregnant women's perceptions on the utilization of traditional birth attendant (TBA) services in North Tongu District of the Volta Region in Ghana.

The study will inform the North Tongu Health Management Team, policy makers, funding agencies and other stakeholders on the management tools to employ to improve delivery rates that will result in improved maternal health and probably a reduction in maternal mortality ratio.

Confidentiality

This information you're about to share will not be disclosed to anyone outside this research team. Your name will not be written, but a number will be assigned to your questionnaire. Every information from this research will be kept private and under lock and key.

Risks

This survey might require you to give very personal details about your perception and utilization of traditional birth attendants' services. You might feel a bit awkward about some of the questions I'll ask but bear in mind you don't have to answer any question if you don't want to. You should also bear in mind you don't have explain if you refuse to partake in in this survey and you don't have explain why you don't want to answer any questions, you're uncomfortable with.

Benefits

You will not be given anything to motivate you to partake in this survey. However, your participation might assist us to find out more about the perception and utilization of traditional birth attendants' services by expectant mothers in the district to find ways and means to educate people to make informed decisions about your perception and utilization of traditional birth attendants' services.

Duration

Due to the detailed nature of the questions I'm about to ask you, this interview might take 20 to 30 minutes to complete. It will involve some questions about your perception and experiences related to the perception and utilization of traditional birth attendants' services by expectant mothers.

It is not compulsory to partake in this survey and you're not obliged to answer any or all of the questions.

Do you have any questions to ask about the interview?

Do you want to partake in it? YES NO

ANSWER ANY QUESTIONS AND ADDRESS RESPONDENT'S CONCERNS.

RESPONDENT AGREES TO BE INTERVIEWED

----- → BEGIN

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED

----- → END

Name of Interviewer _____

Date: _____

RESPONDENT'S SIGNATURE: _____

THUMB PRINT

APPENDIX III: INTERVIEW QUESTIONNAIRE

SOCIODEMOGRAPHIC DATA

UNIQUE RESPONDENT IDENTITY CODE:

NAME OF HEALTH FACILITY:

1. How old are you? (Age/Years)
 - a. <16
 - b. 16-25
 - c. 26-35
 - d. 36-40
 - e. ≤ 45
2. What is your marital status?
 - a. Single
 - b. Married
 - c. Divorced
 - d. Separated
 - e. Widowed
 - f. Cohabiting
3. What is your religion?
 - a. Christian
 - b. Muslim
 - c. Traditional
 - d. Others (Please Specify)
4. What ethnic group do you belong?
 - a. Akan
 - b. Ga/Ga Adangbe
 - c. Krobo
 - d. Ewe
 - e. Others (Please Specify)
5. Do you have NHIS?
 - a. Yes
 - b. No

6. What is your highest level of education?
 - a. Primary
 - b. Junior High
 - c. Vocational
 - d. Senior High
 - e. Tertiary
 - f. None
7. What is your occupation?
 - a. Farming
 - b. Fishing
 - c. Trading
 - d. Teaching
 - e. Others (Please Specify)
8. Who are your employers?
 - a. Government
 - b. Private
 - c. Self Employed
 - d. Unemployed
9. Is this your first pregnancy?
 - a. Yes
 - b. No
10. If **No** for above, indicate the number
 - a. 2
 - b. 3
 - c. 4
 - d. 5 and above

KNOWLEDGE & PERCEPTION ON TBAs AND THEIR SERVICES

1. Have you ever heard of Traditional Birth Attendants?
 - a. Yes
 - b. No
2. Where did you first hear of Traditional Birth Attendants? (First source of Information on TBAs)

- a. Mother
 - b. Father
 - c. Other family member
 - d. Friend
 - e. Neighbor
 - f. Health worker
 - g. Husband/Partner
 - h. Others (Please Specify)
3. Traditional Birth Attendants are licensed and permitted to offer their services.
- a. Yes
 - b. No
4. What functions do you think Traditional Birth Attendants perform? (Knowledge of the functions of TBAs). Please note, multiple responses allowed!
- a. Taking normal delivery
 - b. Perform Cesarean sections
 - c. Gynecological surgeries
 - d. Family planning services
 - e. Antenatal services
 - f. None of the above
5. Traditional Birth Attendants services usually cause complications.
- a. Yes
 - b. No
6. What do you think are some of the complications associated with Traditional Birth Attendants' services? (Knowledge of complications associated with TBA services). Multiple responses are allowed.
- a. Excessive/prolonged bleeding
 - b. Infections
 - c. Damage to reproductive organs
 - d. Transfer of witchcraft
 - e. Possible death of mother and/or baby.
 - f. None of the above

7. Traditional Birth Attendants have adequate knowledge and skills to care for pregnant women.
 - a. Yes
 - b. No
8. Practices of Traditional Birth Attendants are adequately hygienic.
 - a. Yes
 - b. No

ATTITUDE OF RESPONDENTS TO TBA SERVICES

1. Traditional Birth Attendants services achieve desired results for clients.
 - a. Yes
 - b. No
2. The users of Traditional Birth Attendants services are satisfied with their services.
 - a. Yes
 - b. No
3. Traditional Birth Attendants will perform better with formal training.
 - a. Yes
 - b. No
4. Traditional Birth Attendants should be banned.
 - a. Yes
 - b. No

UTILISATION OF TBA SERVICES

EVER USED OF TBA SERVICES

1. Have you ever used the services of TBAs in the past?
 - a. Yes
 - b. No

NOTE: Cross out Question 2, 3 and 4 if you answered No for Question 1 above.

2. If Yes for Question 1 above, which services of TBAs did you use in the past?
Multiple responses allowed.
 - a. Routine antenatal care
 - b. Normal delivery
 - c. Maternal bath against evil spirits

- d. Giving of herbal concoctions to make baby strong and healthy
 - e. Family planning
3. If Yes for Question 1 above, what were your reasons for patronizing the services of the TBA in the past? Multiple responses allowed.
 - a. It is cheaper
 - b. It is more culturally accepted
 - c. TBA home is closer to my house than the health facility
 - d. TBAs are more caring than orthodox health workers.
 - e. It is the only maternity care that I know.
 4. Were you satisfied with the TBA services in the past?
 - a. Satisfied
 - b. Not Satisfied
 - c. Indifferent

CURRENT USE OF TBA SERVICES

5. Are you currently using TBA services?
 - a. Yes
 - b. No

NOTE: Cross out Question 6, 7 and 8 if you answered No for Question 5 above.

6. If Yes for Question 5 above, which services of TBAs are you using currently? Multiple responses allowed.
 - a. Routine antenatal care
 - b. Normal delivery
 - c. Maternal bath against evil spirits
 - d. Giving of herbal concoctions to make baby strong and healthy
 - e. Family planning
7. If Yes for Question 5 above, what is/are your reason(s) for patronizing the services of the TBA currently? Multiple responses allowed.
 - a. It is cheaper
 - b. It is more culturally accepted
 - c. TBA home is closer to my house than the health facility
 - d. TBAs are more caring than orthodox health workers.
 - e. It is the only maternity care that I know.
8. Are you satisfied with the TBA services you are receiving so far?

- d. Satisfied
- e. Not Satisfied
- f. Indifferent

EVER USED & CURRENT USE OF TBA SERVICES

- 9. Have you ever used TBA services in the past and currently using their services again?
 - a. Yes
 - b. No

APPENDIX IV: PLAGIARISM CHECK REPORT

THE PERCEPTION AND UTILIZATION OF TRADITIONAL BIRTH ATTENDANTS' SERVICES BY EXPECTANT MOTHERS AT THE NORTH TONGU DISTRICT IN THE VOLTA REGION, GHANA

ORIGINALITY REPORT

18% SIMILARITY INDEX	15% INTERNET SOURCES	7% PUBLICATIONS	6% STUDENT PAPERS
--------------------------------	--------------------------------	---------------------------	-----------------------------

PRIMARY SOURCES

1	bmcpregnancychildbirth.biomedcentral.com Internet Source	2%
2	www.europeanjournalofmidwifery.eu Internet Source	2%
3	www.ncbi.nlm.nih.gov Internet Source	1%
4	Submitted to ekiti Student Paper	1%
5	udsspace.uds.edu.gh Internet Source	1%
6	ugspace.ug.edu.gh Internet Source	1%
7	www.eajournals.org Internet Source	1%
8	dspace.unza.zm Internet Source	1%